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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

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Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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MORTALITY AND MORBIDITY STATISTICS — RÉSUMÉ OF ACTIVITIES, 1928.

ESTIMATED DEATHS AND RATES FOR CALENDAR YEAR 1928, COMPARED WITH ACTUAL DEATHS AND RATES FOR PREVIOUS YEARS.

Deaths.— The mortality statistics for the year just closed indicate that the health of the people of Boston was good. The number of deaths from all causes was 11,560 — of which 18 per cent were nonresidents, and based upon a population of 799,200 the death rate for the year is 14.5 per 1,000 of the population. As compared with 1927 there was an increase of 458 deaths.

Births.— The total number of live births during the year was 18,850, a decrease of 221 over the previous year, allowing a birth rate of 23.59 as against 24.05 for 1927, and 23.68 for 1926. A normal rate for a large city is 25, and Boston continues to show a small decline each year. This may be due to the tendency of young married people to move to less crowded sections outside the limits of the City of Boston as well as others who, because of their improved economic conditions, are able to maintain homes in cities and towns adjacent to Boston.

BOSTON HEALTH DEPARTMENT.— DEATHS IN BOSTON FOR CALENDAR YEAR 1928, WITH COMPARISONS FOR PREVIOUS FOUR YEARS.

(These figures include residents and nonresidents.)

	* Total, 1928.	Total, 1927.	Total, 1926.	Total, 1925.	Total, 1924.	Total, 1923.
Total deaths	11,560	11,102	11,719	11,571	10,933	11,503
Death rate per 1,000 population	(14.46)	(14.00)	(14.89)	(14.77)	(14.07)	(14.93)
Total live births	18,850	19,071	18,640	18,596	19,776	19,020
Birth rate per 1,000 population	(23.59)	(24.05)	(23.68)	(23.74)	(25.46)	(24.69)
Total infant deaths	1,445	1,455	1,575	1,582	1,472	1,569
Infant mortality rate per 1,000 live births	(76.66)	(76.29)	(84.49)	(85.1)	(74.4)	(82.5)
Total deaths over sixty years	4,820	4,389	4,549	4,360	4,000	4,265
Deaths of mothers from pregnancy	126	141	137	125	150	137
Maternal mortality rate per 1,000 live births and stillbirths	(6.5)	(7.2)	(7.1)	(6.5)	(7.3)	(7.0)

(These figures include residents and nonresidents.)

	* Total, 1928.	Total, 1927.	Total, 1926.	Total, 1925.	Total, 1924.	Total, 1923.
TOTAL DEATHS FROM:						
Anterior poliomyelitis	14	63	7	9	6	10
Cerebrospinal meningitis	17	29	26	24	19	22
Diphtheria	63	60	54	99	168	173
Influenza	62	37	76	81	30	97
Measles	71	40	60	113	44	57
Pneumonia (broncho)	776	583	680	624	542	678
Pneumonia (lobar)	576	531	602	557	482	635
Scarlet fever	31	53	38	47	51	58
Tuberculosis (pulmonary)	581	601	684	670	670	677
Tuberculosis (other forms)	83	82	110	117	114	114
Typhoid fever	5	9	14	27	15	10
Whooping cough	52	31	108	69	21	109

(These figures include residents and nonresidents.)

	* Total, 1928.	Total, 1927.	Total, 1926.	Total, 1925.	Total, 1924.	Total, 1923.
TOTAL DEATHS FROM:						
Heart disease	2,428	2,134	2,279	2,008	1,742	1,880
Nephritis (chronic)	628	663	660	591	577	649
Cerebral hemorrhage	629	598	625	689	749	705
Arteriosclerosis	275	242	326	396	392	404
Totals	3,960	3,637	3,890	3,684	3,460	3,638

(These figures include residents and nonresidents.)

	* Total, 1928.	Total, 1927.	Total, 1926.	Total, 1925.	Total, 1924.	Total, 1923.
TOTAL DEATHS FROM:						
Cancer	1,227	1,218	1,179	1,159	1,189	1,142
Diarrhea and enteritis (under two years)	208	230	231	157	162	148
Accidents	576	607	602	667	615	645
Suicides	107	104	105	111	109	123
Homicides	23	31	31	27	40	37
Diabetes mellitus	177	187	206	166	184	187
Alcoholism	120	143	148	197	210	170

* 1928 totals subject to slight revision.

Cases and Deaths from Reportable Diseases Reported During 1928, 1927, 1926 and 1925.

	1928. Cases.	1928. Deaths.	1927. Cases.	1927. Deaths.	1926. Cases.	1926. Deaths.	1925. Cases.	1925. Deaths.
Actinomycosis	3	2	4	3	1	1	1	1
Anterior poliomyelitis	121	14	413	63	29	7	46	9
Anthrax	—	—	—	—	—	—	—	—
Cerebrospinal meningitis	30	17	34	29	41	26	42	24
Chicken pox	2,039	2	2,787	1	2,117	4	1,516	2
Diphtheria	989	63	1,369	60	982	54	1,256	99
Dog bite (requiring anti-rabic treatment)	127	—	82	—	36	—	21	—
Cat bite	4	—	3	—	1	—	1	—
Dysentery:								
Amebic	4	2	1	—	1	—	5	1
Bacillary	5	1	8	4	5	2	20	3
Flexner	—	—	—	—	—	—	—	—
Shiga	—	—	—	—	—	—	—	—
Not specified	1	1	3	3	5	5	2	2
Encephalitis lethargica	20	14	25	12	30	18	59	32
German measles	135	—	159	—	2,062	2	586	—
Hookworm	—	—	—	—	8	—	20	—
Influenza	339	62	186	37	411	76	357	83
Malaria	7	—	4	—	8	—	3	1
Measles	8,220	71	4,433	40	4,331	60	6,683	114
Mumps	282	—	2,365	—	1,577	—	283	—
Pellagra	13	4	9	4	6	2	10	3
Pneumonia (lobar)	1,646	576	1,390	531	1,603	602	1,807	557
Rabies in man	3	3	1	1	—	—	—	—
Scarlet fever	2,621	31	4,110	53	3,064	38	2,873	48
Septic sore throat	90	13	73	15	67	11	68	15
Tetanus	6	3	5	4	12	7	21	8
Trachoma	42	—	28	—	32	—	62	—
Trichinosis	1	—	0	—	6	—	17	1
Tuberculosis (pulmonary)	1,457	581	1,511	601	1,720	684	1,841	670
Tuberculosis (other forms)	412	83	303	82	352	110	342	116
Typhoid fever	80	5	121	9	139	14	151	27
Typhus fever	—	—	0	0	—	—	2	—
Whooping cough	1,910	52	1,123	31	3,575	108	2,022	69
Totals	20,607	1,600	20,550	1,583	22,221	1,831	20,117	1,885

There were also reported 986 cases of ophthalmia; 2,444 cases and 2 deaths from gonorrhea, and 757 cases of syphilis with 69 deaths for calendar year 1928.

Infant Mortality.— Deaths of infants under one year of age numbered 1,445, and is the lowest number ever recorded in the history of the City of Boston (as far back as the statistics were tabulated, 1871), and shows an infant mortality rate of 76.66 as compared with a rate of 76.29 for 1927 and 84.49 for 1926. Boston each year has an average of 20 per cent of nonresident deaths under one year of age. Of the 1,445 deaths under one year of age, 640 died during the first month of life. Inherent weakness (congenital inability to live) will, as usual, account for most of these deaths under one month.

Communicable Diseases.— Boston has been fortunate during the year in not having experienced any severe outbreak or epidemic of communicable diseases. Although there was a widespread prevalence of infantile paralysis in the United States, which included towns adjacent to this city, Boston escaped its ravages. Among other communicable diseases there has been the usual fluctuations.

Typhoid Fever.— The decline in deaths from typhoid fever continued and the number of deaths and the death rate from this disease were the lowest ever recorded since statistics were first tabulated for this disease. Boston occupies an enviable position in this regard, having but five deaths reported during the entire year from this disease, showing a death rate of .63 per 100,000 of population, a rate probably not excelled or equalled by any other large city in the world. Figures such as these indicate a good water supply, a proper system of sewage disposal, besides intensive work that is done to protect the milk and food supply of the people.

Tuberculosis.— There is much satisfaction in noting a further decline in the number of deaths from pulmonary tuberculosis and all forms of tuberculosis: 581 deaths were reported from pulmonary tuberculosis, giving a death rate of 72.7 per 100,000 of the population, and 664 deaths from all forms of tuberculosis,— a death rate of 83.1 per 100,000 of the population, the lowest rates ever recorded from this disease in Boston.

Scarlet Fever — Diphtheria.— These diseases are continuing to be of less practical importance each year, and although the tendency has been a reduction in the number of deaths from these diseases, measures and methods for prevention and control will not be relaxed. Deaths from diphtheria numbered 63, an increase of 3 of over the preceding year, whereas scarlet fever took a toll of 31 deaths as against 53 for the previous year.

Whooping Cough.— This diesase continues to be serious, dangerous and insidious. Treated with almost contempt by most parents it was the cause of 52 deaths during the past year. The Whooping Cough Commission of Boston is making a special study of this disease.

Smallpox and Leprosy.— Two cases of leprosy were discovered in Boston and prompt measures were taken to insure their immediate transfer to the National Leprosarium at Carville, La. Smallpox was found on three different occasions in the city and were promptly hospitalized without the disease having an opportunity to spread.

Rabies (In Animals).— The experience of the year has served to accentuate a troublesome situation which is going to grow worse until public opinion will support effective measures for its control. In 1925 there were demonstrated nine cases of rabies in Boston. In 1926 the number had increased to 30, and in 1927 it had jumped to 130, a number which will be almost reached in the year just closed. Investigation of persons bitten by dogs shows that most of the trouble is caused by unlicensed dogs which infest the city, and is aggravated by the present popularity of the large treacherous dogs of the European working-dog type, commonly referred to as "police dogs."

Summary.— Decreases in deaths during 1928 as compared with 1927 were shown in the following *reportable* diseases: Typhoid fever tuberculosis, epidemic meningitis, anterior poliomyelitis, scarlet fever and septic sore throat. Increases were shown in deaths from diphtheria, influenza, measles, lobar pneumonia and whooping cough. In the group of *general* diseases, increases were shown in the following: Heart disease, cerebral hemorrhage, arterior sclerosis and broncho pneumonia. Decreases were shown in deaths from diabetes, chronic nephritis, cancer, diarrhoea and enteritis (under two years) and alcoholism.

Child Hygiene.

We are co-operating with other authorities for the enactment of regulations providing for the examination of summer camps and the students that attend them. Although there are few, if any, of these camps in Boston we are concerned with the children of this city who attend these camps during the summer season and desire them to return to their homes in as good physical condition at least as when they left them.

The year just ended showed much progress in adding to the chain of health units in this city, and through the farsightedness and generosity of the Mayor a splendid structure was purchased in Roxbury which is now being remodelled to provide a modern, up-to-date unit for the people of that section of Boston. The former out-patient department of the Boston Sanatorium Department has been converted to a health unit, and land was purchased in Charlestown and the corner stone laid in the summer of the year for a George Robert White Health Unit in that section. It is hoped, therefore, that in 1929 there will be a total of seven health units operating in

this city, the greatest addition that has been made since the inauguration of health units in Boston.

These units, as is well known, are intended to house organizations and associations interested in child welfare, and are clearing houses for all health activities in the sections of the city where they are located. Their worth has been well attested, not only by local authorities but by public health experts from all parts of the world who visit them and find them models of their kind. The roofs of these units are now utilized for the observation and care of the undernourished who are known to be tubercular contacts. A nutritional demonstration is also carried on in connection with this work.

In addition, this department maintains 19 child health conference stations at which are held 31 conferences every week. These are held in the many sections of the city and are devoted exclusively to babies. The pediatricians in charge of these stations, and who work with the nurses of this department, are selected by the three medical schools in Boston and they are on the teaching staffs of these schools: Harvard, Tufts and Boston University. To cite an instance of the popularity of these baby conferences it might be mentioned in passing that the attendance of babies and preschool children for the year now coming to a close will be 65,000. These figures do not include the number of visits by the nurses of this department to cases of tuberculosis, communicable diseases, and to infants who for one reason or another do not come to the conferences.

It is expected that with our seven health units in operation, and with the completed program of infant welfare and tuberculosis that will be carried on by the forces of this department, results are bound to accrue that will reflect credit on those responsible for such a full measure of assistance.

Bacteriological Laboratory.

The laboratory of this department will have made 50,000 examinations by the end of the year, and in addition to the routine work of diagnosis, considerable time and study have been spent on other problems. Exhaustive studies have been made of the tide waters of Savin Hill and Freeport beaches for evidences of pollution. Further work has been done on wash waters in laundries and in swimming pools of the city. Special technical and bacteriological studies have been made and will be continued next year. The subjects under investigation include the efficiency of methods of cleaning eating and drinking utensils.

Diagnosis clinics have been instituted in the five health units and five other districts, so that in ten different sections of Boston there were 1,272 clinics held for the examination and diagnosis of 13,364 persons, an average of eleven persons per clinic. The program, as a whole, has been confronted with much difficulty, due to a shortage of beds, both in the city and state institutions. His Honor the Mayor together with Boston City Hospital Trustees have arranged for a new hospital unit on the grounds of the Boston Sanatorium, to be completed next year, which will reduce the bed shortage in the city in a most satisfactory manner. This will be one of the finest accomplishments in the tuberculosis program which could be hoped for. The present policy, entered into with the State Division of Tuberculosis and the Boston City Hospital Trustees placed all power of selecting candidates for hospitalization in tuberculosis hospitals in the hands of the Health Commissioner, acting through the director of the Division of Tuberculosis.

It is part of this policy to determine and establish speedily and with accuracy the legal settlement of each candidate in order to preclude the possibility, so far as is reasonable and humane, of admission of cases which belong to other municipalities and to the state, in our local hospital. So far, this plan has worked well, with profit and great advantage.

Health unit roofs, covered with vita glass, are being utilized for children of a pre-school age class, who are undernourished, and have been contacts with tuberculosis patients. A study is made of each child prior to his entrance, of his food intake, etc., that it may be used in planning his nutrition. Weekly classes are held by the nutritionists with the mothers of these children, in order to develop such knowledge as will enable them to keep up a normal condition in the children, once it is established. These roofs are in operation, each day, for ten months in the year. X-ray outfits are installed in each of the units and are for the service not only of the patients regularly attending the clinics, but also for the aid in diagnosis of the practising physicians in said district.

The Division of Tuberculosis, as well as the Division of Child Hygiene, is furnished with an examining staff of physicians, from the three medical schools in the city, namely, Harvard, Tufts and Boston University, each one of whom has been selected by the Health Commissioner for excellence in training, ability and experience.

Food Inspection.

There have been more than fifty thousand inspections of stores and manufactories, together with over three thousand reinspections where defects have been found to exist.

The cleaning up of a long-standing unsatisfactory sanitary condition at the Boston Fish Pier was an important achievement of the Food Division. Careless handling of fish and fish waste over a long period had resulted in unclean conditions, which were looked upon as almost necessary. Notices were issued concerning the care of fish waste in proper receptacles, and co-operative action was taken by the Boston Fish Market Corporation. Their tenants were requested by circular letter of the corporation to keep their places in order, and arrangements were made also for a daily flushing of the pier. Much favorable comment has been received on the result of this action, and federal officials are reported as regarding the Fish Pier as the best conducted in the country.

At present a co-operative survey is being made with federal officials of nuts and nut meats in warehouses and terminals. To date, more than two tons of nuts and nut meats have been seized and condemned.

Special surveys have been made of tonic and ice cream manufacturing plants with a veiw to improving sanitary conditions in these places. The proper labeling of tonics was also inquired into.

Another special work of importance was a survey of the great ice-making plants of this city. Conditions under which ice is made were observed and noted and samples were taken of the ice and all water used in any way in the process of manufacture. With few exceptions, serious faults were observed and subsequent analysis bore out the findings. Some defects observed were spitting in the tank water surrounding the ice tanks, the throwing of cigarettes and matches into the tank water, and in two cases the use of contaminated harbor water to free ice from the freezing tanks. Twenty-six samples were taken. Steps were taken to correct the conditions complained of, and the ice manufacturers are co-operating in every particular.

Terminal inspection at the railroad again showed astounding totals of condemnations. Without resorting to tables, it may be sufficient to state that in one month more than thirty tons of Mexican tomatoes were seized on account of injury from blight, insect injury and mold. In another month, there was a seizure of 31,100 pounds of turnips and 15,300 pounds of onions.

The market inspection has resulted in huge seizures for unfitness. To date, more than forty tons of meats of all kinds have been condemned as unwholesome and unfit for food. A close watch has

been kept on the offerings of pedlers on the big Saturday night market, resulting in the withdrawing of many pounds of decayed fruit and vegetables.

Semiannual inspection under the provisions of the Bakery Law was made of the 600 manufacturing bakeries in this city. Conditions on the whole were good, and where defects were observed, notices to correct were served.

Special inquiry involving a number of inspectors was instituted following receipt of two complaints where large numbers of people were made ill following the eating of pastry made with contaminated cream filling. Every possible source of contamination at the plant which was thought might be a potential cause of illness was eliminated. In addition, a broad inquiry was made of the larger plants where cream filling was processed, and suggestions tending to avert any recurrence of illness from such sources were put into effect.

Milk Inspection.

Special investigation and successful prosecution of an unusual adulteration of cream and cheese with a foreign substance, to wit, mineral oil, was conducted during this year.

There has been established a new system of follow up of violations of Health Department regulations, which has had good success in aiding the guilty persons to correct faulty conditions without resorting to court procedure. This has resulted in increased efficiency of operations, an improved supply of the foods concerned, and a better feeling between the trade and this department.

Recommendations have been made to the State Department of Health for a regulation for establishments for the pasteurization of milk, requiring that no milk having a prepasteurization count of more than 750,000 bacteria per cubic centimeter be received for pasteurization, and advocacy of said recommendation to final adoption. An important step towards preventing the depreciation of good milk by the admixture of milk unfit for human use.

New Regulations.

Amendments have been added to the present milk regulations of the Health Commissioner, which tighten up on the reporting of diseases among milk handlers; which adopt a maximum prepasteurization count of 750,000 bacteria per cubic centimeter; which lower the maximum bacteria content of milk from 100,000 to 50,000 per cubic centimeter; and which finally excludes from Boston all raw milk not certified, thereby reducing to practically an irreducible minimum the potential danger which always exists in raw milk.

Regulations on ice cream were promulgated, which, if enforced, will put ice cream on the same plane of safety as pasteurized milk.

Notices were issued to producers of market milk for distribution to the producer through the wholesaler, the object being to help the producer to send better milk to Boston in order to comply with the maximum prepasteurization standard of 750,000 bacteria per cubic centimeter, effective January 1, 1929. One of the large distributors of milk in Boston reports that this circular was the deciding factor in enabling them to get the agreement of 99.5 per cent of their producers to cut and store three tons or more of ice per cow each year.

A movement was initiated to provide for those who wish it a certified milk which has been pasteurized, and it is to be marked, "Certified Milk Pasteurized."

Dairy Inspection.— In pleasing contract to the opposition of dealers and producers met with in former years, our inspectors now report that any suggestions tending to improve the quality of the milk meet with approval and as a result this year hundreds of milk houses have been erected throughout the New England milk shed for the proper handling and storage of milk. A steady improvement has been noted at the country creameries, twelve having been remodeled and automatic jug washers are rapidly doing away with hand washing methods. Another innovation is the glass lined tank car which eliminates cans, much labor and the necessity of washing cans at city plants. Six of these cars are now in operation and more will be in use for the coming year. Our local dealers have taken steps to meet the requirements of the new milk regulations by installing clarifiers, filters and other apparatus. Four plants have been completely rebuilt, eleven added new equipment, and one of the largest milk plants in the country is now in process of construction.

Sanitary Inspection.— The routine work of the Sanitary Inspection Division is never spectacular, but the representatives of this division more than any other come in direct contact with the public. The regular inspections made by this division during the past year very largely required efforts to induce or to compel somebody to do something which he did not want to do. Frequently the inspectors find themselves involved in neighborhood feuds and family quarrels, when some of the participants endeavor to secure reinforcements from official sources by alleging the existence of nuisances. By the manner in which they perform their duties constantly calling for tact and diplomacy the efficiency of the department as a whole is judged.

During the year this division investigated 7,220 complaints. There were 32,111 original inspections and 31,126 structural and maintenance defects noted in buildings and ordered remedied, 344 inspections of public halls, theaters and auditoriums were made for licensing purposes. There were the usual routine inspections of dumps, stables, tenement houses, barber shops, hospitals, premises where fowl are kept, yards, cellars and passageways, and it might be stated that the number of stables have been reduced to the actual number where horses are kept, rather than the thousands of structures that at one time were used for the stabling of horses but now have gone in to disuse due to the advent of the automobile and the truck. The licenses that were once issued for these buildings have been revoked because the buildings have been demolished or converted into garages.

For any progress that has been made this year credit is due his Honor the Mayor for his unfailing consideration of the progressive problems and his willingness and desire to co-operate to the expenditure of additional public funds to carry on the work and to further new projects that redound to the health and happiness of the community. Appropriations have been increased and more personnel allowed for the programs that have been determined upon. This may be attested and proven by the fact that a greater amount of money has been allowed by the Mayor than in any year in the history of the department, and we are now spending more than one dollar per capita for public health requirements. This does not include the cost of hospitals or new health units built under the provisions of the George Robert White Fund.

The plans for the coming year aim at the perfection and enlargement of programs already started. It is expected that this may be accomplished, without any greatly increased appropriation, but sufficient only to continue many projects that were started during the year and for which necessarily a full year's appropriation was not granted last year.

THE INTERNATIONAL CONFERENCE ON ANTI-TUBERCULOSIS VACCINATION.

The conference on antituberculosis vaccination by the B C G vaccine, which convened at the Institut Pasteur at the instance of the health service of the League of Nations, completed its investigation Thursday morning, October 18, by the adoption of the reports of the three subcommittees — the clinical, the bacteriologic and the veterinary. The program of the international researches was adopted, subject to the later approval of the health commission of the League of Nations. The researches will be carried out by the

principal institutes of several countries, and their results will be centralized and studied by the health section of the League of Nations at Geneva. The object of these researches is to establish whether antituberculosis vaccination with the B C G vaccine is harmless as well as efficacious. A second conference will be held to consider the results of these researches. The subcommittee of the veterinarians was unanimously of the opinion that vaccination of animals of the bovine species with the B C G vaccine is harmless and that it confers a degree of immunization toward experimental and natural tuberculous infection. Liekwise the bacteriologic subcommittee held the view that the B C G vaccine is harmless, and proposed a comprehensive inquiry to be undertaken in a great number of institutes of various countries to study the mode of preparation and the characteristic properties of the B C G vaccine. The subcommittee of the clinicians expressed the conviction that the B C G vaccine, administered by mouth to the new-born during the first ten days of life, and by the subcutaneous route to older children and adults, is not liable to cause virulent tuberculous lesions, and that, furthermore, vaccination with the B C G vaccine does actually confer a certain degree of immunity. It submitted a plan for the collection of information in the clinics and dispensaries on the morbidity and the tuberculosis mortality among the nonvaccinated. These conclusions, when they were announced here, produced an excellent impression. At the last meeting, Prof. Leon Bernard presented in his own name and in that of his collaborators, MM. Debré and Lelong, a favorable communication on the B C G vaccine, but with certain reservations. Of 105 children vaccinated, which he examined and controlled, he noted positive skin reactions in fifty-five and no reactions in fifty. M. Le Lorier also introduced a favorable communication. According to his personal observations, the B C G vaccine caused no untoward symptoms in the children vaccinated, and the majority of them are today in excellent health. M. Calmette then announced the favorable conclusions of the International Commission and introduced some new items. Since September, 1926, all the children born within the territory controlled by the Compagnie des mines de béthume have been vaccinated — up to Aug. 31, 1927, 845 children. The mortality has been lowered to 3.5 per cent, whereas the mortality of children, during the first year of life, is, in France, 8.5 per cent. —(*From J. A. M. A., Foreign Letters, Paris correspondent.*)

PUBLIC HEALTH INSTITUTE.

Information concerning the Annual Public Health Institute conducted by the Massachusetts Institute of Technology, Cambridge, Mass., may be had by writing Prof. C. E. Turner at the

Institute. Although the program for next summer has not yet been completed, preliminary arrangements indicate that it will cover the entire field of public health, embracing subjects that are of interest to health officers and public health workers. The staff selected are experts in their particular subjects.

The program should be of particular value to local health departments and agencies concerned with public health and welfare, whose members and assistants are interested in the latest scientific attainments in public health.

SUMMARY OF WORK, DECEMBER, 1928.

ADMINISTRATION DIVISION.

Prosecutions ordered	2	Personnel:	
Legal notices	156	Appointment, temporary	1
Lying-in hospitals approved	2	Appointment, provisional	1
Settlements:		Appointments, permanent	4
Total cases	220	Leave of abscence	1
Notices	184	Resignation	1
Bills	36	Promotion	1
		Trip authorized	1

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,088	Milk	168
Denatured alcohol	26	Pedlers	30
Hen licenses	29	Beverage	1
Manicure-massage	77	Garbage transportations	3
Lying-in hospitals	2	Stable permits, temporary	2
Dumps	18		

MEDICAL DIVISION.

Reported cases	1,581	Visits:	
Nonresidents	58	By V. D. investigator	316
Deaths investigated	16	By medical inspectors to cases of communicable disease,	499

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	861
Tuberculosis	434
Typhoid	48
Gonorrhea	907
Gonorrheal ophthalmia	95
Syphilis	1,034
Other examinations *	142
Bacteriological examinations of milk	642
Bacteriological examinations of ice cream	60
Dark field	1
Genito urinary T. B.	28
Swimming pools examined	64

* Vincent's angina, 3, urines, 90; feces for B. Typhosus, 18; urines for B. Typhosus, 18; chicken for organisms, 1; milk for organisms, 1; eclairs for B. Coli, 3; blood for Typhus, 1; smears for virulence, 3; pie for B. Coli, 1; candy for dirt, 1; chicken for T. B., 1; water for sewage, 1.

FOOD DIVISION.

SURVEY OF THE QUALITY OF MILK SOLD BY BOSTON WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores during December, 1928. Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat; for bacteria, it is required that it contain per cubic centimeter not more than 100,000 in pasteurized milk and in raw milk; and not more than 10,000 in certified milk.

KEY TO KIND OF MILK.

P Means pasteurized milk.
C Means raw certified milk, the only kind sold by this dealer.
R Means raw milk from accredited herds of tuberculin tested cows, the only kind sold by this dealer.

NAME OF DEALER.	Kind of Milk.	SOLIDS.	FAT.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
Allen, Fred H.	P	12.45	3.80	20
Antetomasso, Peter	P	12.65	3.92	17
Barron, C. W.	C	13.60	4.60	6
Brandley, F. J. & P. J.	R	12.68	4.10	22
Buxton, William E.	R	13.06	4.10	28
Casey, James	P	12.74	3.90	19
Cashin, James F., & Co.	P	12.60	3.83	21
Cedar Hill Farm, Inc.	C	13.30	4.35	16
Chapin, George L.	P	13.02	4.08	25
Clapp, Frank L.	P	13.18	3.90	24
Clark, Levi	P	12.70	3.95	27
Corkery, John J.	P	12.46	3.78	28
Cosgrove, Martin S.	P	12.94	3.90	26
Cummings, Francis S., Company	P	12.23	3.66	21
Daley, John	P	12.63	3.90	19
Dean, Louis W.	P	13.97	4.58	22
Deerfoot Farms Company	P	12.76	3.92	16
Denehy, Timothy	P	12.35	3.58	19
Driscoll, William B., Company	P	12.71	3.90	17
Edgerly, Frank S.	P	12.53	3.98	20
Elm Spring Farm Company	P	12.37	3.63	16
Ferguson, Malcolm D.	P	12.74	3.75	49
Garfield, Mason	R	14.74	5.45	14
Garvin, Charles	P	15.52	6.15	22
Giroux, J. E. & H. J.	P	12.46	3.80	40
Griffin, Joseph L.	P	12.66	3.70	19
Gushee, Chester W.	P	12.92	3.92	49

Name of Dealer.	Kind of Milk.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
Hampden Creamery Company	P	12.98	3.83	40
Herlihy Brothers, Inc.	P	12.43	3.76	33
Hickey, James B.	P	12.54	3.85	29
Holden, John E.	P	12.57	3.76	24
Hood, H. P., & Sons, Inc.	P	12.37	3.73	17
Hutchinson, Frank T.	P	12.13	3.63	22
Jones, William T., Company	P	12.80	4.02	22
Kendall Brothers	P	12.56	3.78	14
Kingston, Samuel	P	12.42	3.65	34
Knapp, George J.	P	12.67	3.92	31
Lang Brothers	P	12.59	3.80	20
Larsson, Charles	P	12.41	3.72	23
Lydonville Creamery Association	P	13.09	4.14	26
Manning, Hattie	P	12.80	3.97	24
McAdams, J. F., & Brothers, Inc.	P	12.53	3.79	22
McKernan, James	P	12.41	3.77	19
Munchback, Albert W.	P	12.78	3.91	42
New England Creamery Products Company	P	12.73	3.98	19
Pine Grove Dairy, Inc.	P	12.83	3.93	12
Robinson, A. J.	P	13.09	4.23	25
Schuster, Adam	P	12.45	3.79	22
Seven Oaks Dairy Company	P	12.56	3.76	25
Shick, Jacob	P	12.32	3.68	23
Somerset Farms Creamery Company	P	13.34	4.33	15
Sterling Farms Milk Company	P	12.95	3.98	21
Stone, H. L.	P	12.36	3.78	16
Stuart, W. E., Company	P	12.64	3.86	20
Turner Center System	P	12.52	3.77	24
United Farmers Co-operative Creamery Company	P	12.86	4.00	14
Vartanian, K.	P	12.40	3.85	20
Vartanian, S.	P	12.66	4.00	19
Walker-Gordon Laboratory Company	C	12.52	4.02	7
Weiler, E., & Sons	P	12.90	4.13	27
Westwood Farm Milk Company	P	12.55	3.81	18
White Brothers	P	12.67	3.87	15
Whiting Milk Companies	P	12.41	3.70	20
Whittemore, W. D.	P	13.03	3.93	20
Williams, Edward C.	P	12.84	4.13	9
Wiswall, Granville A.	P	12.56	3.81	26
Woodland, Charles L.	P	12.49	3.65	16

CHAIN STORE MILK.

Name of Dealer.	Supplied by	Kind of Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria, Thousands in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc.	P	12.34	3.77	21
Brown, M., & Sons.....	Whiting Milk Companies.	P	12.38	3.72	18
Cloverdale, The, Company,	Turner Center System...	P	12.54	3.85	26
Economy Grocery Store Company.	Whiting Milk Companies.	P	12.43	3.72	25
First National Stores, Inc.	Bellows-Falls Co-operative Creamery.	P	12.93	4.00	20
Morgan Brothers Company,	New England Creamery Products Company.	P	12.64	4.03	24
Winer, M., Company.....	M. Winer Company.....	P	12.87	3.98	25

MILK INSPECTION — SAMPLES EXAMINED.

Chemical:

Milk from wagons	367
Milk from stores	927
Milk brought by citizens	26
Vinegar	173
Ice cream	2
Water	3
Wall paper	1
Salad dressing	1
Butter and cheese	3
Preservative	1
Miscellaneous examinations	9
Samples referred to Bacteriological Laboratory for examination	702
Court cases	38
Fines	$440

DAIRY DIVISION.

Total services	873	Total cattle inspected	5,656
Dairies inspected	301	Inspections of milk plants and licensed dealers	305
Scoring above 50*	236	Bacteriological examinations	120
Scoring below	65	Country creamery inspections	3
With milk rooms	242	Sediment tests	122
Without milk rooms	59		
Inactive	22		

FOOD INSPECTION DIVISION.

DECEMBER, 1928.

District inspections	2,928
Reinspections	712
Market inspections	1,670
Terminal inspections	619
Vehicle inspections	8,397
Stand inspections	2,466
Complaints	38
Notices to abate	195

Condemnations:

Meat	3,777 pounds	Vegetables	151,091 pounds
Fish	1,793½ pounds	Confectionery	15 pounds
Fruit	86,413 pounds	Canned goods	39 pounds
Nuts	1,782 pounds		

*Passable mark.

ABATTOIR DIVISION.

Cattle inspected	3,803	Parts condemned (lbs.)	19,952
Calves inspected	3,467	Animals condemned	50
Swine inspected	5,358		

SANITARY DIVISION.

Original inspections	3,295	Complaints investigated	484
Reinspections	8,031	Nuisances abated	2,179
Legal notices served	156		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	18	168	98	266	27	26	53
East Boston	8	82	98	180	15	8	23
North End	9	36	77	113	2	2	4
West End	8	42	44	86	2	4	6
South Boston	5	100	15	115	20	21	41
Boston Dispensary	13	31	11	42	14	2	16
Brighton	3	6	5	11	—	2	2
Charlestown	4	22	28	50	6	4	10
Codman square	4	69	64	133	7	5	12
Hyde Park	4	17	34	51	4	5	9
Totals	76	573	474	1,047	97	79	176

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	30	23	242	154
East Boston	19	13	72	35
North End	8	1	47	32
West End	11	3	—	— *
South Boston	25	15	155	54
Boston Dispensary	2	4	—	—*
Brighton	2	—	—	—*
Charlestown	2	—	—	—*
Codman square	7	5	—	—*
Hyde Park	6	4	—	—*
Totals	112	68	516	275

* No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING DECEMBER, 1928.

Classification.	Number.	Percentage.
After death	19	36.54
Seven days or less	2	3.85
Eight to fourteen days, inclusive	2	3.85
Fifteen to twenty-one days, inclusive	—	—
Twenty-two to thirty-one days, inclusive	2	3.85
Within First Month. (Total)	25	48.09
Within second month	5	9.61
Within third month	—	—
Within fourth month	3	5.77
Within fifth month	1	1.92
Within sixth month	—	—
Within seventh month	1	1.92
Within eighth month	2	3.85
Within ninth month	2	3.85
Within tenth month	1	1.92
Within eleventh month	1	1.92
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	41	78.85
Within second year	4	7.69
Within third year	2	3.85
More than three years	5	9.61
Grand totals	52	100.00

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, December, 1928.

Inspections	19
Physical examinations	237
Toxin-antitoxin administrations	98
Schick tests given	136
Vaccinations performed	140
Vaccination certificates issued	111
Day nursery visits	30

TOXIN-ANTITOXIN INJECTIONS AND VACCINATIONS, DECEMBER, 1928.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	15	16	12	43	—
31 Lincoln street, Brighton	—	—	—	—	2
Charlestown Municipal Building	—	—	—	—	6
Codman Square Library	10	29	26	65	12
Columbia Road Municipal Building	6	5	5	16	8
1 Arcadia street, Dorchester	—	—	—	—	—
East Boston Health Unit	—	—	—	—	—
Hyde Park Municipal Building	2	6	5	13	10
Curtis Hall, Jamaica Plain	—	—	—	—	14
41 North Margin street	4	3	2	9	8
Roslindale Municipal Building	2	6	8	16	12
Children's Hospital	5	4	7	16	9
1049 Columbus avenue	8	6	10	24	23
Vine Street Municipal Building	2	—	1	3	10
133 Dorchester street, South Boston	—	—	—	—	1
122 Tyler street	5	6	3	14	5
Shawmut Avenue Municipal Building	1	1	1	3	1
57 East Concord street	6	2	3	11	—
17 Blossom street	—	—	—	—	1
Totals	66	84	83	233	122

MONTHLY REPORT OF CHILD HEALTH CONFERENCES, DECEMBER, 1928.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	163	15	178	26	3	29	4	45
31 Lincoln street, Brighton	68	10	78	8	—	8	4	20
Charlestown Municipal Building	198	14	212	20	6	26	9	24
Codman Square Library	300	40	340	46	2	48	9	38
Columbia Road Municipal Building	368	23	391	46	5	51	9	43
1 Arcadia street, Dorchester	182	3	185	27	—	27	7	26
East Boston Health Unit	265	27	292	59	7	66	9	32
Hyde Park Municipal Building	204	26	230	23	8	31	7	33
Curtis Hall, Jamaica Plain	153	5	158	21	—	21	4	40
41 North Margin street	144	29	173	17	1	18	7	25
Roslindale Municipal Building	245	43	288	23	2	25	5	58
Children's Hospital	133	—	133	11	—	11	3	44
1049 Columbus avenue	246	9	255	34	2	36	7	36
Vine Street Municipal Building	339	14	353	34	2	36	9	39
133 Dorchester street, South Boston,	314	42	356	43	6	49	7	51
122 Tyler street	80	20	100	12	—	12	3	33
Shawmut Avenue Municipal Building,	89	14	103	5	1	6	4	26
57 East Concord street	128	11	139	17	1	18	4	35
17 Blossom street	311	47	358	30	1	31	9	40
Totals	3,930	392	4,322	502	47	549	120	36

DENTAL ACTIVITIES AT HEALTH UNITS.

DECEMBER, 1928.

	East Boston.	North End.	South Boston.	South End.	West End.	Total.
Number of cases seen	502	418	525	407	504	2,356
Number of treatments by dentists	1,070	741	972	886	772	4,441
Number of treatments by hygienist	48	59	91	6	121	325

Cases referred by: Public schools; parochial schools; roof (T. B. contacts); Home for Destitute Catholic Children; parents.

HEALTH UNIT ACTIVITIES.

DECEMBER, 1928.

Boston Dispensary:	
Calls by district physician	437
Boston Lying-In Hospital:	
Number of clinics	19
Total attendance	260
Number new cases	67
Community Health Association:	
Homes visited	10,642
Cases referred	601
Diseases reported	75
Number of meetings of mothers' clubs	16
Total attendance	272
State Department of Mental Diseases:	
Number of clinics	5
Total attendance	23
New cases	6
Children's Hospital — Infant Clinics:	
Number of clinics	8
Total attendance	71
New cases	1
Family Welfare Society:	
Number of staff meetings	9
Total attendance	111
Catholic Charitable Club:	
Number of meetings	1
Total attendance	12
Nose and Throat Service:	
Number of clinics	4
Attendance	43
Operations recommended	21
American Red Cross:	
Number of home nursing classes	6
Total attendance	50

Refractions Service:		
Number of refractions		83
New cases		83
Glasses recommended		28

NURSING DIVISION.

Homes Visited		15,545
Child Hygiene:		
Visits to new cases	1,358	
Visits to old cases	9,797	
Total		* 11,155
Communicable Diseases:		
Visits to new cases	990	
Visits to old cases	2,220	
Total		† 3,210
Tuberculosis:		
Visits to new cases	153	
Visits to old cases	3,814	
Total		‡ 3,967
Miscellaneous:		
Infant death investigations	80	
Maternal death investigations	1	
Patients accompanied to hospital	11	
Visits to day nurseries	31	
Visits to parochial schools	410	
Posture clinics	4	
Total		537
Total number of visits		18,869

Hours at station by nurses	3,844	25
Hours at baby and P. S. conferences	1,608	20
Hours at tuberculosis clinics	811	30
Hours at posture clinics	383	10
Total number of hours	6,607	25

* Includes 101 wrong addresses; 1,123 not seen; 1,224 absent visits.

† Includes 43 wrong addresses; 87 not seen; 130 absent visits; 199 ophthalmia visits.

‡ Includes 32 wrong addresses; 401 not seen; 433 absent visits; 1,840 positive cases visited; 1,015 contact cases visited; 679 suspect cases visited.

Most persons who contract pneumonia have had colds.

Colds are never to be neglected. Their proper care should include the avoidance of crowds where people may be scattering pneumonia germs.

VITAL STATISTICS, DECEMBER, 1928.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING DECEMBER, 1928, WITH COMPARATIVE FIGURES FOR DECEMBER, 1927.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1928.	1927.	Increase or Decrease.	1928.	1927.	Increase or Decrease.
All Causes:						
Total deaths	**930**	954	—24	**13.96**	14.44	—.48
Nonresidents deducted	**776**	801	—25	**11.65**	12.12	—.47
By Age:						
Under one year	**110**	107	+3	**1.65**	1.62	+.03
One year to four years, inclusive	**27**	52	—25	**.40**	.79	—.39
Sixty years and over	**421**	407	+14	**6.32**	6.16	+.16
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**37**	55	—18	**.55**	.83	—.28
Arteriosclerosis	**36**	19	+17	**.54**	.29	+.25
Heart disease	**196**	198	—2	**2.94**	3.00	—.06
Nephritis, chronic	**45**	75	—30	**.67**	1.13	—.46
Infant and Maternal Mortality:						
a. Total registered live births	**1,253**	1,262	—9	**18.81**	19.10	—.29
b. Registered stillbirths	**33**	28	+5	**.49**	.42	+.07
Stillbirths per 1,000 births and stillbirths	—	—	—	**25.66**	21.70	+3.96
c. Deaths of mothers from causes incident to childbirth	**6**	8	—2	**.09**	.12	—.03
Deaths of mothers per 1,000 births and stillbirths	—	—	—	**4.66**	6.20	—1.54
Deaths of children in first year of life	**110**	107	+3	**1.65**	1.62	+.03
Deaths in first year per 1,000 live births	—	—	—	**87.16**	87.79	—.63
Violence:						
Accidents	**40**	53	—13	**.60**	.80	—.20
Homicides	**1**	2	—1	**.015**	.03	—.015
Suicides	**7**	7	—	**.10**	.10	—
Miscellaneous:						
Alcoholism, acute or chronic	**11**	17	—6	**.16**	.26	—.10
Broncho-pneumonia	**80**	35	+45	**1.20**	.53	+.67
Cancer	**97**	96	+1	**1.46**	1.45	+.01
Cirrhosis of the liver	**7**	4	+3	**.10**	.06	+.04
Diabetes mellitus	**12**	15	—3	**.18**	.23	—.05
Diarrheal diseases, children under two years of age	**17**	16	+1	**.25**	.24	+.01

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON, DECEMBER, 1928.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1928.	1927.	Increase or Decrease.	1928.	1927.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	5	17	—12	.07	.26	—.19
Deaths.	—	4	—4	—	.06	—.06
Cerebrospinal meningitis.....Cases..	2	2	—	.03	.03	—
Deaths.	—	3	—3	—	.04	—.04
Diphtheria.....Cases..	120	105	+15	1.80	1.59	+.21
Deaths.	7	5	+2	.10	.07	+.03
Influenza.....Cases..	138	12	+126	2.07	.18	+1.89
Deaths.	9	6	+3	.13	.09	+.04
Measles.....Cases..	48	961	—913	.72	14.54	—13.82
Deaths.	—	12	—12	—	.18	—.18
Pneumonia (lobar).....Cases..	154	152	+2	2.31	2.30	+.01
Deaths.	53	55	—2	.79	.83	—.04
Scarlet fever.....Cases..	233	307	—74	3.50	4.64	—1.14
Deaths.	1	6	—5	.015	.09	—.075
Tuberculosis (pulmonary).....Cases..	111	112	—1	1.67	1.69	—.02
Deaths.	52	52	—	.78	.79	—.01
Tuberculosis (other forms).....Cases..	32	19	+13	.48	.29	+.19
Deaths.	6	4	+2	.09	.06	+.03
Typhoid fever.....Cases..	5	5	—	.07	.07	—
Deaths.	—	—	—	—	—	—
Whooping cough.....Cases..	112	183	—71	1.68	2.77	—1.09
Deaths.	1	6	—5	.015	.09	—.075

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1928 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

TO PHYSICIANS.

Have you attended any births during the calendar year 1928, or any previous year, wherein you failed to make a return of the births to the City Registrar?

The registration of births is of vital importance for its value to both the child and its parents, and for the record of your city in its standing among the cities of the country and the world with respect to its infant mortality rate.

There are many important instances where a birth certificate is found to be of value, especially in later life, and when it has not been reported much embarrassment is caused not only to the individual concerned but to the physician who was in attendance at the birth. We know that a birth certificate is necessary many times during life, and when we need it there is nothing that can replace it; it becomes invaluable. A birth certificate is requested in many cases, some of which are as follows:

Evidence of age on entering school; inheritance of property; proof of age, relationship, and legitimacy; proving of age of consent; marriage licenses (in some instances); passports; employment or working certificates; entrance into military, naval, and civil service, and often in private employment; in voting; jury service; administration or settlement of estates; relations of guardians and wards.

Full and Complete Birth Registration Insures a Lower Infant Mortality.

Doctor, look over your records of confinements, and report to the City Registrar any births you have thus far failed to report this year. You will then be not only complying with the law, but fulfilling an obligation that is due the child, its parents, and the Commonwealth. If you have any doubt as to any such birth, mail a duplicate to the City Registrar, and so mark it.

FRANCIS X. MAHONEY, M. D., Health Commissioner.

EDWARD W. McGLENEN, City Registrar.

LAW ON BIRTH REPORTING.

Chapter 46, General Laws, section 3: Every physician, or hospital medical officer registered under section 9 of chapter 112, shall keep a record of the birth of every child in cases of which he was in charge, showing date and place of birth, the name, if any, of the child, its sex, color, the name, age, birthplace, occupation and residence (including the street number, if any, and the ward number, if in a city) of each parent, the maiden name of the mother and the name of the physician or officer, if any, personally attending the birth. If the child is illegitimate, the name of and other facts relating to the father shall not be set forth except upon written request of both the father and the mother. Said physician or officer shall, within fifteen days after such birth, mail or deliver to the clerk or registrar of the town where such birth occurred, a report stating the facts herein above required to be shown on said record and also the said written request, if any; provided that if said report is not made within forty-eight hours after such birth, said physician or officer shall, within forty-eight hours, mail or deliver to said clerk or registrar a notice stating the date and place of birth, the street number, if any, the ward number, if in a city, and the family name, upon presentation to him of a certificate of the town clerk stating that any such birth has been duly reported, the town treasurer shall pay to such physician or officer a fee of 25 cents for each birth so reported.

Any physician or any such officer violating any provision of this section shall forfeit not more than twenty-five dollars.

1339 Supt

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

VOL. 18. BOSTON, FEBRUARY, 1929. No. 2

INFLUENZA IN BOSTON.

Infections of the upper respiratory tract have been unusually prevalent in Boston and vicinity since early autumn. There was also evidence of an unusual prevalence of such infections last April and May. The infections which prevailed during the autumn were not usually disabling in character, but frequently left a persistent cough.

Early in December there began to be signs that infections of the upper respiratory tract were taking on a new aspect. Deaths ascribed in death certificates to lobar pneumonia, which had been running below the five-year average for the season, mounted above this average and physicians began sending in reports of cases of influenza in unusual numbers. Deaths from broncho-pneumonia also began to show an evident tendency to increase.

Every reported case of influenza was investigated by a medical inspector of the Health Department. These investigations indicated that reports of cases of influenza in Boston were largely the result of the publicity given to the prevalence of influenza in other parts of the country and which was evidently spreading from West to East.

The usual history of a reported case of influenza in Boston at that time was that a person had been suffering from a cold for some time and had finally felt obliged to stay home from work and perhaps remain abed for two or three days. The contagious character of the infection was indicated by the frequency with which two or more members of the same household or groups of fellow workers became affected within a period of two or three days. Recovery was usually uneventful and prostration not very pronounced.

Toward the latter part of December infections of the respiratory tract began to take on a more serious character. Absenteeism from industry began to manifest itself to a very unusual extent for this season of the year. Persons who had not been suffering from "colds," as well as those with previous catarrhal symptoms, began to be stricken down with an abruptness and prostration characteristic of a true influenza. Apparent recovery was often followed by a relapse with manifestations of serious infections of the respiratory tract. Cases in which the digestive tract was involved were common.

By the first of January reported cases of influenza and lobar pneumonia had begun to mount rapidly, as did also deaths ascribed directly to influenza, and to some form of lobar pneumonia and to broncho-pneumonia.

The high prevalence of respiratory infections continued through January without definite indications of abatement. Toward the end of the month there appeared a tendency of reported cases of influenza to decrease, but it was evident that the pneumonias were continuing to show much more than a seasonal increase.

The investigations of the Boston Health Department would indicate that the disability and mortality in the present epidemic are the result chiefly of a mixed infection. What infective agents have been involved have not been determined, so far as the department is aware. The department's investigation would, however, indicate that while broncho-pneumonia greatly predominates in death certificates there is a marked tendency to report as lobar pneumonia cases which are properly classifiable as broncho-pneumonia. The most common type of lobar pneumonia to be found in Boston at the present would appear to be type IV.

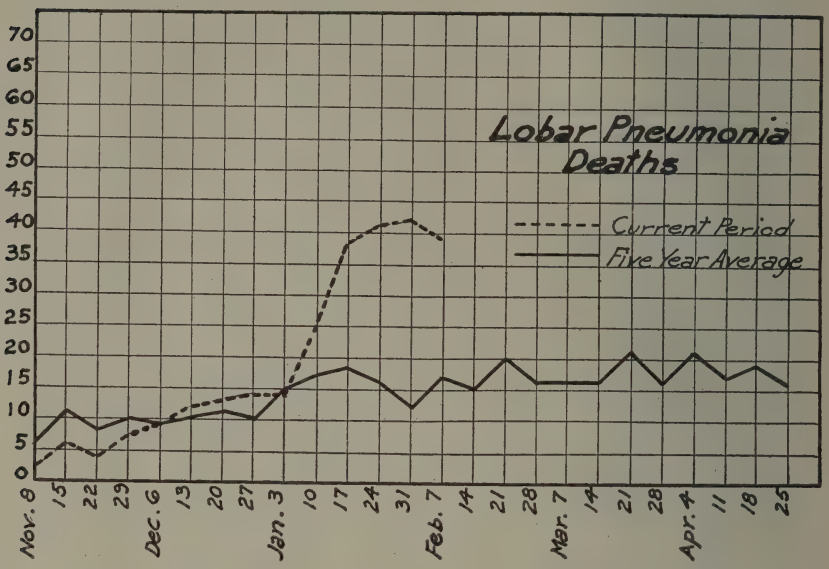
CASES AND DEATHS FROM INFLUENZA AND LOBAR PNEUMONIA, BY WEEKS, FROM NOVEMBER 3 TO FEBRUARY 16.

Week Ending.	Influenza.		Lobar Pneumonia.	
	Cases.	Deaths.	Cases.	Deaths.
November 3	1	.....	17	4
November 10	3	.....	15	2
November 17	1	2	12	7
November 24	27	2	23	5
December 1	4	2	22	7
December 8	5	.....	30	8
December 15	11	2	29	11
December 22	24	2	27	12
December 29	65	3	48	14
January 5	224	4	64	13
January 12	674	19	55	24
January 19	606	16	109	39
January 26	360	25	141	41
February 2	164	16	130	42
February 9	98	9	92	38
February 16	58	5	42	22

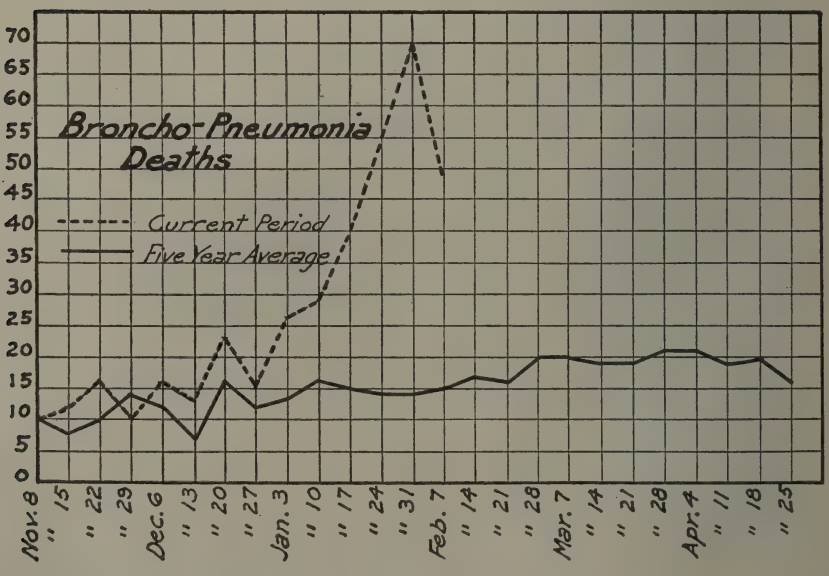
DEATHS FROM INFLUENZA, LOBAR PNEUMONIA AND BRONCHO-PNEUMONIA BY AGE PERIOD FOR MONTH OF JANUARY, 1929.

Age Period.	Influenza.	Lobar Pneumonia.	Broncho-Pneumonia.
Under one year	2	8	41
One year to five years	3	10	30
Five years to twenty years	1	11	5
Twenty years to forty years	12	44	13
Forty years to sixty years	26	36	26
Sixty years and over	34	43	87
Total	78	152	202

DEATHS FROM LOBAR PNEUMONIA, BY WEEKS, FOR THE CURRENT PERIOD, NOVEMBER 8 TO FEBRUARY 7, SHOWING COMPARISON WITH FIVE-YEAR WEEKLY AVERAGE.



DEATHS FROM BRONCHO-PNEUMONIA, BY WEEKS, FOR THE CURRENT PERIOD, NOVEMBER 8 TO FEBRUARY 7, SHOWING COMPARISON WITH FIVE-YEAR WEEKLY AVERAGE.



PUBLIC HEALTH COURSE.

The Third Public Health Institute will be conducted by the Department of Biology and Public Health at the Massachusetts Institute of Technology under the direction of Profs. S. C. Prescott and C. E. Turner, from June 24 to July 13. This institute aims to provide for the health officer or other qualified public health worker an opportunity to study and discuss public health procedures and to examine modern public health practices under the direction of experts in the respective fields. The Public Health Institute is conducted with the co-operation of the Metropolitan Life Insurance Company and the Massachusetts Association of Boards of Health. A committee consisting of Doctors Curtis, Denny and Safford are assisting in planning the program for this course. The course is an intensive one, and the lectures, discussions and clinics will be held morning and afternoon, Sundays and holidays excepted.

Although exact details cannot now be stated the plan of the course is approximately as follows:

Inspection.— Week of June 24 to June 29. The problems of milk supply, water supply, sewage disposal, garbage disposal and sanitary inspections of various kinds.

Administration.— Week of July 1 to July 6. Rural sanitation, nutrition, dental hygiene. Health clinics and pre-school clinics, public health nursing, school health administration, publicity, vital statistics and health surveys, health department organization and public health law.

Control.— Week of July 8 to July 13. This week is given over to the important subject communicable disease control, including diphtheria, scarlet fever, typhoid fever, tuberculosis, pneumonia, smallpox, venereal diseases and others.

This arrangement has been made so that it may be possible for those health workers who cannot devote the time to take the whole course to secure in a few days an intensive yet comprehensive survey of the division of health administrative procedure in which they are most vitally interested.

The lectures, conferences and discussions will be conducted by men who are leaders in their respective fields. The list of those participating in earlier years is an impressive one and contains some of the leading experts in the country. The same high standard will be maintained; support is urged of this important annual undertaking by the Institute of Technology to assist in the advancement of public health in this effective and useful manner. The fee for the whole institute will be but $40, and for a single week or less at the rate of $2.50 per day. The fee is placed at this very low

figure in order to make it possible for many to participate who would find it difficult to pay what instruction in these lines would ordinarily cost. This is a unique agency in health education, designed, as may be assumed, to meet the needs of those already in public health work rather than the young student without some previous experience in this field.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Influenza.

Statistics of influenza are usually complicated by the inclusion or exclusion of deaths from pneumonia, and extreme care is necessary in their use to avoid an erroneous interpretation. It is an open question whether the practice of combining influenza and pneumonia (all forms) is really consistent with the best practical use of this information. In the annual discussion of mortality in the reports of the Division of Vital Statistics of the Census Office, influenza and pneumonia are combined yielding, in 1924, a death rate of 117.7 per 100,000. In that year, however, the death rate from uncomplicated influenza was 19.6, while for pneumonia not complicated with influenza it was 98.4. Since 1923 the number of deaths from uncomplicated influenza has been as follows:

MORTALITY FROM INFLUENZA, UNITED STATES REGISTRATION AREA, 1923-27. RATE PER 100,000.

	Deaths.	Rate.	Pneumonia (all forms).
1923	43,370	44.7	(109.9)
1924	19,374	19.6	(98.4)
1925	30,538	29.6	(29.9)
1926	42,809	40.7	(58.6)
1927	24,471	22.6	(46.8)

I have inserted in the preceding table, in brackets, the rates for all forms of pneumonia.

The foregoing statistics are striking evidence of the great practical importance of influenza as a cause of death in modern life. They furthermore emphasize the continued prevalence of this insidious affection and on a large scale since the epidemic of 1918. Since 1919 the outstanding epidemics have occurred during the week of February 14, 1920, February 25, 1922, March 5, 1923, June 15, 1925, and March 27, 1926. The weekly incidence varies considerably, however,

for different sections of the country. It reached its earliest point during the year 1926 in California and its latest in the State of Maine. No precise correlation between influenza and the common respiratory diseases and primary and secondary pneumonia can be established. Some interesting statistics concerning the influenza epidemic of 1926 have been published in reprint No. 1104 of the United States Public Health Reports for August 20, 1926.

The crude death rate for influenza in 1920 was 55.4 per 100,000 of population in the registration states. The rate for males was 55.7 and for females 52.2, indicative of the practical equality of the sexes. The rates were somewhat higher in the registration area, or 71.0 per 100,000, or respectively 67.3 for the white and 109.6 for the colored population. In the registration area, influenza reached a maximum degree of incidence in 1918 when the rate mounted to 306.8 per 100,000. During that year it was 293.4 for the white and 381.0 for the colored population. The mortality for 1920 was highest at ages under one, and at ages seventy-five and over, reaching a minimum of incidence at ages ten to fourteen. By divisional periods of life the influenza death rates for 1920 without distinction of sex have been as follows in the registration states:

INFLUENZA DEATH RATES, UNITED STATES REGISTRATION STATES, 1920. RATE PER 100,000.

Under 5	129.1	35–44	73.3
5– 9	21.0	45–54	57.4
10–14	18.6	55–64	74.5
15–19	40.4	65–74	144.5
20–24	55.2	75 and over	315.3
25–34	88.4		

The rates are usually higher for the foreign born, particularly those whose mothers were born in Ireland. In the city of Chicago, for example, the adjusted death rate for 1920 was 72.9 per 100,000 persons of Irish origin, 59 for persons of Scandinavian origin, 50.9 for German, 47.2 for native United States. However, these figures are but indications of racial variations which must not be carried too far, since they are influenced again by local conditions which cannot be dealt with on this occasion.

The number of deaths in England and Wales in 1926 was 8,936, or respectively 4,540 for males and 4,396 for females, also indicative, of no special sex effect on the death rate. During the preceding year there were 12,721 deaths, and during 1923 18,986 deaths. Of the 8,936 deaths in 1926, 3,788 were the pneumonia complications, and 1,701 with other pulmonary complications. The death rate from influenza per 100,000 for England and Wales in 1926 was 22.9, or respectively 24.3 for males and 21.6 for females. During the pre-

ceding year, the rate was 32.7 and during 1924 it was 48.9. In 1918 the rate was as high as 307.8. In that year the rate for males was 320.7 and for females 298.3.

Since this was written, influenza has once more come to the forefront as an outstanding health problem not only of national but of international importance. The present epidemic is fortunately of a less fatal character than the pandemic of 1919–20. While the number of cases is not as yet correctly ascertainable, it is said to exceed a million for the whole country. Outbreaks have been reported from different parts of the world indicative of the pandemic character of the disease. Influenza first became noticeable in this country during the week of November 12 when for 64 cities, 78 deaths were reported with a slight increase also in the mortality from pneumonia. The table below will show the number of deaths reported by weeks for 64 large cities, so that the figures are thoroughly representative for the country at large.

DEATHS FROM INFLUENZA AND PNEUMONIA, UNITED STATES, NOVEMBER 3, 1928 — JANUARY 19, 1929.

Week of:	Influenza.	Pneumonia.
November 3, 1928	51	567
November 10, 1928	78	587
November 17, 1928	91	587
November 24, 1928	105	791
December 1, 1928	203	853
December 8, 1928	291	1,009
December 15, 1928	477	1,226
December 22, 1928	766	1,645
December 29, 1928	1,081	1,981
January 5, 1929	1,424	2,469
January 12, 1929	1,513	2,564
January 19, 1929	995	2,274

According to the preceding table the mortality reached its peak during the week of January 12 and apparently is now on a decline. The same conclusion applies to pneumonia as to influenza. The effects of this mortality on the general death rate is best made evident by the statement that for the week ending January 19, the general death rate for 65 cities was 18.9 per 1,000 against 13.4 for the corresponding week in 1928.

Pneumonia.

Pneumonia, all forms, in 1926 caused 107,797 deaths in the registration area, being the second most important cause of death, following diseases of the heart considered as a group. The rate of mortality in 1926 was 102.5 against 93.5 for 1925. For recent years the death rates from pneumonia per 100,000 of population

have been as follows. For purpose of comparison, I also include the corresponding rates for England and Wales.

DEATHS FROM PNEUMONIA, 1916–27—RATE PER 100,000.

Year.	United States.	England and Wales.	Year.	United States.	England and Wales.
1916	137.8	106.1	1922	102.1	107.3
1917	150.5	112.4	1923	109.0	87.0
1918	286.2	162.7	1924	98.2	100.0
1919	123.5	106.4	1925	93.5	95.1
1920	137.3	99.1	1926	102.5	82.8
1921	88.3	91.6	1927	80.6	94.8

In 1924, of the number of deaths from pneumonia, all forms, given as 97,403, the number due to lobar pneumonia was 50,676, broncho-pneumonia, 40,641, and pneumonia, unspecified, 6,096. But this distinction is of doubtful scientific value in many cases in which the disease is complicated, particularly when this is due to influenza. The high rate for 1918, of course, is explained by the epidemic of that year. The interrelations of pneumonia and influenza in 1918 were such that according to the Mortality Report for that year, in studying the effects of the pandemic of influenza, it was not considered best to study separately influenza and the various forms of pneumonia, bronchitis, and the respiratory diseases, for doubtless many cases were returned as influenza when the deaths were caused by pneumonia, and vice versa.

The distribution of pneumonia by age and sex is shown in the table following for the year 1920, which is the latest analysis available for the purposes.

MORTALITY FROM PNEUMONIA, UNITED STATES REGISTRATION STATES, 1920—RATE PER 100,000.

Age.	Total.	Male.	Female.
Under 1	1,403.4	1,581.2	1,221.4
1–4	219.6	229.4	209.7
5–9	32.0	33.2	30.7
10–14	19.2	20.3	18.1
15–19	43.4	51.4	35.5
20–24	65.5	67.3	63.8
25–34	99.6	100.3	98.8
35–44	96.6	112.4	79.2
45–54	112.5	126.9	96.3
55–64	195.2	212.2	176.8
65–74	425.3	427.3	423.4
75 and over	1,054.0	970.6	1,125.2

With the exception of the age period seventy-five and over, the death rates from pneumonia are, therefore, shown to have been consistently higher for males than for females, but the differences do not become very pronounced until after age thirty-five. For

both sexes in 1920, the adjusted death rate for pneumonia was 144.7, having been 154.4 for males and 135.1 for females. In 1910, in the same area, the death rate for both sexes was 144.0, having been 156.1 for males and 131.9 for females. For England and Wales, the corresponding death rates for 1920 were 99.1 for both sexes, or respectively 121.8 for males and 78.8 for females. For 1926, the rate for England and Wales was 82.4 for both sexes, or 98.6 for males and 68.3 for females. The incidence of pneumonia is unquestionably closely related to variable weather conditions. Unfortunately, exact data of the coincidence of particular weather changes and pneumonia are difficult to secure. One of the most exhaustive studies of the relation of pneumonia incidence and climate has been made for India by Sir Leonard Rogers, the well-known authority on leprosy. Among the climatological conditions influencing pneumonia distribution, he mentions rainfall, humidity, cold weather minimum temperatures, diurnal variations in the winter temperatures, and direction of the winds. He distributes seasonal incidence of pneumonia as follows: Cold season, November to February, 45 per cent; hot season, March to June, 31 per cent; and rainy season, July to October, 24 per cent. The discussion by Sir Leonard Rogers was published in the "Lancet" of June 6, 1925.

Pneumonia is also closely related to population congestion. This has been emphasized in an analysis of the mortality of greater New York, according to which the rate for pneumonia in the Mulberry district, the most congested area of the city, bounded by Houston and Canal streets, is 4.38 per thousand against 1.78 for New York City as a whole. This information was secured from a survey made by the Association for Improving the Condition of the Poor.

There is also a close relation between pneumonia and occupation, especially in the latter involving employment with weather exposure. Unfortunately, for this country, no exact data on this phase of the problem are at present available.

Pittsburgh has for many years had the unenviable reputation of having one of the highest pneumonia rates in the country. In 1924, the pneumonia death rate of Pittsburgh was 301.1 per 100,000 against a rate of 138.0 for New York City and 135.3 for Boston. The excessive rate of pneumonia in Pittsburgh has been attributed to the grossly polluted atmospherical conditions of that city, and an extended report on the subject was made some time ago by Dr. W. C. White of the United States Public Health Service to the American Society of Mechanical Engineers. Quoting from a brief note in the "Transcript" of November 29, 1927, it is said that, "The fact that Pittsburgh, one of the smokiest cities, has the highest constant

death rate of any community in the world, and that the pneumonia death rate of the city by wards is higher where the smoke content of the air is densest, indicates that smoke has a tremendous influence on this disease. Definite proof of this correlation is still lacking, and further research in the field is necessary. It is probable that smoke bears no relation to the tuberculosis death rate or to the death rate from cancer. Pittsburgh has a low tuberculosis death rate and a comparatively low death rate from cancer."

Race, likewise, is an important factor and the negro almost invariably has a high death rate from pneumonia than the corresponding white rate in the same community. In 1924, for illustration, the death rate from pneumonia in the State of Georgia was 80.3 for the whites and 126.9 for the colored. For Louisiana the white death rate from pneumonia was 82.1 against 149.9 for the colored, but for Mississippi the difference was less pronounced, the white rate having been 77.6 and the colored, 98.1.

DEATH OF FREDERICK S. DAVIS.

Frederick S. Davis, formerly deputy health commissioner in charge of the Division of Vital Statistics, Records and Accounts of the Boston Health Department, died January 10 at his home, 146 Massachusetts avenue, Boston, after an illness of two days. For many years he was a resident of West Roxbury. Mr. Davis first entered the service of the Health Department in 1881 as a clerk, and later became the bookkeeper of the department. Upon the reorganization of the Boston Health Department in 1916 he was promoted to the position of secretary. In this capacity he served until the following year when he was appointed a deputy commissioner in charge of Vital Statistics, Records and Accounts, and retired from the service on November 1, 1927, having reached the retirement age of 70 years.

ANNUAL MEETING, MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.

The annual meeting and luncheon of the Massachusetts Association of Boards of Health was held at the University Club on January 31, with sixty-five members in attendance.

The program consisted of the regular business meeting, followed by the election of officers for 1929.

Prof. S. C. Prescott explained the aims and purposes of the public health school at Technology which will be found on another page of the "Bulletin."

New legislation was the main theme of the meeting.

Prof. Curtis M. Hilliard of Simmons College explained the "Union Health District" bill now before the Legislature, and Dr. George H. Bigelow explained at length the various proposed measures that are now pending, including bills on vaccination, milk, hospitals, tularemia, pasteurization, etc., and urged the members to interest themselves in these matters for the sake of public health progress.

SUMMARY OF WORK, JANUARY, 1929.

ADMINISTRATION DIVISION.

Prosecution ordered	1	Settlements:	
Legal notices	92	Total cases	98
		Notices	83
Lying-in hospital approved	1	Bills	15
Notice to vacate	1	Personnel:	
		Trip authorized	1
Bakery closed	1	Retirement	1

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,682	Dumps	26
Denatured alcohol	7	Milk	156
Hen licenses	13	Pedlers	24
Manicure-massage granted	44	Garbage transportations	26
Manicure-massage revoked	2	Day nurseries	8

MEDICAL DIVISION.

Reported cases	3,662	Visits:	
Nonresidents	134	By V. D. investigator	335
Deaths investigated	15	By medical inspectors to cases of communicable disease	1,024

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	1,022
Tuberculosis	456
Typhoid	19
Gonorrhea	877
Gonorrheal ophthalmia	104
Syphilis	1,086
Other examinations *	239
Bacteriological examinations of milk	715
Bacteriological examinations of ice cream	40
Dark field	3
Genito urinary T. B.	17

* Urines, 208; Vincent's angina, 8; clams for B. Coli, 5; fæces for dysentery, 1; cake for coal dust, 1; cultures for virulence, 6; smears for leprosy, 4; smear for anthrax, 1; turkey for ptomaine, 1; olives for botulinus, 1; smear for diphtheria, 1; lamb for poison, 1; smear for typhus, 1; milk bottles examined, 2, caps for milk bottles examined, 6.

FOOD DIVISION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk, sold in Boston by wagon dealers and chain stores, during January, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Boston Medical Milk Commission which may be sold either raw as Certified Milk, or pasteurized as Certified Milk—Pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than 72 hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.33	3.75	10,000
Antetomasso, Peter.	12.45	3.85	13,000
Bolio, William.	12.45	3.77	23,500
Brandley, F. J. and P. J.	12.80	4.08	200
Buxton, William E.	12.74	3.89	12,000
Casey, James.	12.56	3.80	20,000
Cashin, James F. & Co.	12.65	3.86	9,000
Chapin, George L.	12.95	4.05	34,000
Clark, Levi.	12.50	3.90	11,000
Corkery, John J.	12.55	3.81	19,000
Cosgrove, Martin S.	13.03	3.95	12,000
Cummings, Francis S., Company.	12.31	3.70	13,500
Daley, John.	12.23	3.73	8,300
Dean, Louis W.	13.46	4.00	24,000
Deerfoot Farms Company.	12.79	3.99	9,500
Denehy, Timothy.	12.41	3.58	16,000
Driscoll, William B., Company.	12.88	4.16	8,000
Edgerly, Frank S.	12.87	4.07	15,000
Elm Spring Farm Company.	12.42	3.68	35,500
Ferguson, Malcolm D.	12.74	3.79	36,500
Garfield, Mason.	14.91	5.50	13,000
Garvin, Charles.	14.90	5.35	5,000
Giroux, J. E. and H. J.	12.61	3.87	9,000
Griffin, Joseph L.	12.71	3.83	12,000
Gushee, Chester W.	12.52	3.73	40,000
Hampden Creamery Company.	12.78	3.60	12,000

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Herlihy Brothers, Inc.	12.40	3.76	15,000
Hickey, James B.	12.24	3.75	70,000
Holden, John E.	12.66	3.93	13,500
Hood, H. P., & Sons, Inc.	12.45	3.82	24,500
Hutchinson, Frank T.	12.24	3.60	14,000
Jones, William T., Company	13.09	4.15	7,500
Kendall Brothers	12.56	3.79	20,500
Kingston, Samuel	12.67	3.75	8,800
Knapp, George J.	12.48	3.79	12,000
Lang Brothers	12.71	3.84	48,500
Larsson, Charles	12.36	3.68	30,500
Lyndonville Creamery Association	13.00	4.00	23,500
Manning, Harriet	12.41	3.67	29,000
McAdams, J. F., & Brothers, Inc.	12.72	3.88	22,500
McKernan, James	12.56	3.90	13,000
Munchback, Albert W.	12.96	4.09	21,000
New England Creamery Products Company	12.81	4.03	12,000
Pine Grove Dairy, Inc.	12.91	3.95	13,000
Robinson, A. J.	12.91	3.97	44,500
Schuster, Adam	12.33	3.72	33,000
Seven Oaks Dairy Company	12.47	3.78	20,000
Shick, Jacob	12.54	3.79	70,000
Somerset Farms Creamery Company	13.60	4.50	10,000
Sterling Farms Milk Company	12.77	3.84	29,500
Stone, H. L.	12.93	4.08	13,000
Stuart, W. E., Company	12.77	3.93	5,000
Turner Center System	12.84	3.83	11,000
United Farmers Co-operative Creamery Company	12.61	3.95	12,500
Vartanian, K.	12.30	3.65	10,000
Vartanian, S.	12.37	3.67	11,000
Walker-Gordon Laboratory Company	12.86	4.07	117
Weiler, E., & Sons	13.08	4.30	32,000
Westwood Farms Milk Company	12.62	3.83	9,250
White Brothers	12.93	4.10	15,500
Whiting Milk Companies	12.52	3.81	19,500
Whittemore, W. D.	12.91	3.93	9,600
Williams, Edward C.	12.88	4.30	3,900
Wiswall, Granville A.	12.49	3.78	26,500
Woodland, Charles L.	12.45	3.88	3,050

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc.	12.49	3.93	24,000
Brown, M., & Sons	Whiting Milk Companies	12.75	3.80	23,000
Cloverdale, The, Company	Turner Center System	12.47	3.75	11,000
Economy Grocery Stores Company.	Whiting Milk Companies	12.36	3.68	12,000
First National Stores, Inc	Bellows Falls Co-operative Creamery.	12.90	4.00	13,500
Morgan Brothers Company	New England Creamery Products Company.	12.93	3.93	22,000
Winer, M., Company	M. Winer Company	13.00	3.98	26,000

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than 48 hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Antetomasso, Peter	12.99	4.20	10,000
Cosgrove, Martin S	13.63	4.55	18,000
Cummings, Francis S., Company	12.76	4.15	8,000
Dean, Louis W	13.38	3.97	31,000
Elm Spring Farm Company	12.68	4.03	7,300
Griffin, Joseph L	13.23	4.21	11,750
Herlihy Brothers, Inc	12.60	4.20	22,000
Hood, H. P., & Sons, Inc	12.85	4.16	5,900
Jones, William T., Company	13.49	4.40	6,500
McAdams, J. F., & Brothers, Inc	12.81	4.23	10,500
New England Creamery Products Company	13.08	4.15	4,000
Robinson, A. J	13.45	4.33	64,500
Sterling Farms Milk Company	12.96	4.10	18,500
Turner Center System	13.62	4.63	7,750
Weiler, E., & Sons Company	13.03	4.32	15,500
White Brothers	12.96	4.45	12,000
Whiting Milk Companies	12.61	4.00	10,000
Woodland, Charles L	12.98	4.25	2,000

CERTIFIED MILK.

Raw milk produced bottled and sealed at the farm under the supervision of the Boston Medical Milk Commission. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during 90 days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Barron, C. W.	14.13	4.84	16,000
Cedar Hill Farm, Inc.	13.40	4.29	10,500
Cummings, Francis S., Company	12.77	3.73	2,600
Hood, H. P., & Sons, Inc.	13.64	4.65	3,400
New England Creamery Products Company	12.20	3.65	2,700
Walker-Gordon Laboratory Company	12.58	4.02	1,775
Whiting Milk Companies	12.82	4.07	2,600

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Boston Medical Milk Commission.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Cedar Hill Farm, Inc.	12.08	3.40	14,000
Hood, H. P., & Sons, Inc.	13.47	4.30	150

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:

Milk from wagons	400
Milk from stores	1,002
Milk brought by citizens	78
Vinegar	175
Ice cream	4
Water	1
Butter and cheese	3
Preservative	0
Miscellaneous examinations	2
Samples referred to Bacteriological Laboratory for examination	763
Court cases	17
Fines	$70

DAIRY DIVISION.

Total services	2,929	Total cattle inspected	2,920
Dairies inspected	171	Inspections of milk plants and licensed dealers	245
Scoring above 50*	131	Bacteriological examinations	909
Scoring below	40	Country creamery inspections,	32
With milk rooms	138	Sediment tests	1,559
Without milk rooms	33		
Inactive	8		

FOOD INSPECTION DIVISION.

JANUARY, 1929.

District inspections	2,103
Reinspections	233
Market inspections	993
Terminal inspections	357
Vehicle inspections	4,258
Stand inspections	1,518
Complaints	33
Notices to abate	98

Condemnations:

Meat	463 pounds	Vegetables	34,956 pounds
Groceries	98 pounds	Confectionery	95 pounds
Fruit	1,713 pounds	Fish	7 barrels, 3 gallons
Chestnuts	1,646 pounds		

ABATTOIR DIVISION.

Cattle inspected	4,103	Parts condemned (lbs.)	17,578
Calves inspected	4,006	Animals condemned	39
Swine inspected	5,153		

SANITARY DIVISION.

Original inspections	1,899	Complaints investigated	456
Reinspections	5,667	Nuisances abated	1,494
Legal notices served	91		

* Passable mark.

Most persons who contract pneumonia have had colds.

Colds are never to be neglected. Their proper care should include the avoidance of crowds where people may be scattering pneumonia germs.

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	17	141	66	207	29	18	47
East Boston	8	78	97	175	12	13	25
North End	9	38	114	152	8	11	19
West End	9	49	43	92	9	4	13
South Boston	4	92	41	133	22	6	28
Boston Dispensary	13	39	21	60	10	1	11
Brighton	4	6	8	14	1	—	1
Charlestown	4	27	30	57	4	2	6
Codman square	4	89	62	151	14	6	20
Hyde Park	5	26	28	54	3	3	6
Totals	77	585	510	1,095	112	64	176

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	32	33	294	160
East Boston	18	10	59	46
North End	10	—	70	—
West End	7	10	—	—*
South Boston	15	18	150	54
Boston Dispensary	5	5	—	41
Brighton	—	—	—	—*
Charlestown	4	—	—	—*
Codman square	12	—	—	—*
Hyde Park	11	6	—	—*
Totals	114	82	573	301

* No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING JANUARY, 1929.

Classification.	Number.	Percentage.
After death	19	26.06
Seven days or less	5	7.04
Eight to fourteen days, inclusive	2	2.96
Fifteen to twenty-one days, inclusive	2	2.96
Twenty-two to thirty-one days, inclusive	—	—
Within First Month. (Total)	28	39.02
Within second month	6	8.45
Within third month	3	4.23
Within fourth month	—	—
Within fifth month	1	1.48
Within sixth month	—	—
Within seventh month	1	1.48
Within eighth month	—	—
Within ninth month	3	4.23
Within tenth month	1	1.48
Within eleventh month	—	—
Within twelfth month	2	2.96
Within First Year Preceding Death. (Total)	45	63.33
Within second year	7	9.86
Within third year	2	2.96
More than three years	17	23.94
Grand totals	71	99.99

INSPECTION OF FOOD IN WAREHOUSES.

Inspectors of the Food Division, continuing a standing policy, are making a special examination of foodstuffs in the local warehouses, in cooperation with the officials of the Federal Food and Drug Division. Many classes of foodstuffs in storage were the subject of examination, particularly those that are especially popular during the winter holidays. Careful attention was paid to possibly moldy or wormy conditions in nuts, due to long holding in storage. The same may be said to apply to figs, raisins and prunes, both in bulk and package form. Nut meats were examined and samples taken and condition noted. Samples of nuts in the shell were also taken and the percentage of decomposition compared with the passable standard. During the fall season there have been seizures and condemnation of these classes of goods, with an approximate total of ten tons.

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, January, 1929.

Physical examinations	102
Schick test	—
Toxin-antitoxin administrations	40
Vaccinations given	82
Vaccination certificates issued	36
Anti typhoid innoculations	1
Visits to day nurseries	23

TOXIN-ANTITOXIN INJECTIONS AND VACCINATIONS, JANUARY, 1929.

Station.	Toxin-Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	4	5	12	21	—
31 Lincoln street, Brighton	1	—	—	1	2
Charlestown Municipal Building	5	2	—	7	3
Codman Square Library	15	15	8	38	7
Columbia Road Municipal Building	3	4	2	9	8
1 Arcadia street, Dorchester	11	5	—	16	9
East Boston Health Unit	—	—	—	—	—
Hyde Park Municipal Building	—	1	1	2	11
Curtis Hall, Jamaica Plain	—	—	—	—	—
41 North Margin street	2	3	1	6	3
Roslindale Municipal Building	3	3	1	7	2
Children's Hospital	8	3	1	12	6
1049 Columbus avenue	3	2	1	6	13
Vine Street Municipal Building	1	2	3	6	10
133 Dorchester street, South Boston	—	—	—	—	1
122 Tyler street	1	4	4	9	—
Shawmut Avenue Municipal Building	—	1	2	3	2
57 East Concord street	9	11	6	26	2
17 Blossom street	—	—	—	—	2
Totals	66	61	42	169	81

MONTHLY REPORT OF CHILD HEALTH CONFERENCES, JANUARY, 1929.

Station.	Number of Babies.	Number of Pre-school.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	191	23	214	10	1	11	5	43
31 Lincoln street, Brighton	73	4	77	10	—	10	5	15
Charlestown Municipal Building	194	23	217	18	3	21	9	24
Codman Square Library	205	47	252	30	2	32	9	28
Columbia Road Municipal Building	317	16	333	31	3	34	9	37
1 Arcadia street, Dorchester	146	14	160	12	2	14	9	72
East Boston Health Unit	224	33	257	33	5	38	9	29
Hyde Park Municipal Building	187	20	207	16	3	19	9	23
Curtis Hall, Jamaica Plain	188	11	199	34	1	35	5	40
41 North Margin street	141	38	179	19	2	21	9	20
Roslindale Municipal Building	159	28	187	15	4	19	4	47
Children's Hospital	121	3	124	16	—	16	4	31
1049 Columbus avenue	218	25	243	33	1	34	9	27
Vine Street Municipal Building	223	12	235	24	1	25	9	26
133 Dorchester street, South Boston,	279	50	329	46	7	53	9	37
122 Tyler street	60	13	73	6	—	6	4	19
Shawmut Avenue Municipal Building,	126	14	140	12	2	14	5	28
57 East Concord street	121	9	130	18	4	22	5	26
17 Blossom street	186	26	212	21	1	22	9	24
Totals	3,359	409	3,768	404	42	446	136	31

DENTAL ACTIVITIES AT HEALTH UNITS.

JANUARY, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	802	660	738	693	749	3,642
Number of treatments by dentists	1,825	1,148	1,200	1,201	1,150	6,524
Number of treatments by hygienist	45	122	180	30	178	555

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

JANUARY, 1929.

Boston Dispensary:	
Calls by district physician	446
Boston Lying-In Hospital:	
Number prenatal clinics	20
Total attendance	262
New cases	75
Community Health Association:	
Homes visited	12,483
Cases referred	1,093
Diseases reported	57
Number of meetings of mothers' club	20
Attendance	207
State Department of Mental Disease:	
Number of clinics	4
Attendance	17
Number new cases	3
Children's Hospital:	
Number of clinics	9
Attendance	63
New cases	—
Refraction Service:	
Number of refractions	45
Number diagnosis	45
Glasses prescribed	19
Nose and Throat Service:	
Number of clinics	4
Attendance	191
Operations recommended	50
Family Welfare Society:	
Number of staff meetings	10
Attendance	103

American Red Cross:	
Number home nursing classes	9
Attendance	81
Boston Health Department:	
Number of meetings of mothers' club	8
Attendance	41

NURSING DIVISION.

Homes Visited		17,031
Child Hygiene:		
Visits to new cases	1,587	
Visits to old cases	10,928	
Total		*12,515
Communicable Diseases:		
Visits to new cases	933	
Visits to old cases	1,986	
Total		†2,919
Tuberculosis:		
Visits to new cases	176	
Visits to old cases	4,188	
Total		‡4,364
Miscellaneous:		
Infant death investigations	85	
Maternal death investigations	2	
Patients accompanied to hospital	9	
Visits to day nurseries	39	
Visits to parochial schools	599	
Posture clinics	—	
Total		734
Total number of visits		20,532

	Hrs.	Min.
Hours at station by nurses	4,224	25
Hours at baby and P. S. conferences	1,854	10
Hours at tuberculosis clinics	920	20
Total number of hours	6,999	15

* Includes 95 wrong addresses; 1,157 not seen; 1,252 absent visits.

† Includes 33 wrong addresses; 74 not seen; 107 absent visits; 249 ophthalmia visits.

‡ Includes 44 wrong addresses; 415 not seen; 459 absent visits; 2,058 positive; 1,043 contacts; 804 suspects.

VITAL STATISTICS, JANUARY, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JANUARY, 1929, WITH COMPARATIVE FIGURES FOR JANUARY, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	**1,562**	1 012	+550	**23.27**	15.19	+8.08
Nonresidents deducted	**1,348**	834	+514	**20.08**	12.52	+7.56
By Age:						
Under one year	**128**	95	+33	**1.91**	1.43	+.48
One year to four years, inclusive	**71**	54	+17	**1.06**	.81	+.25
Sixty years and over	**771**	460	+311	**11.49**	6.91	+4.58
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**74**	63	+11	**1.10**	.94	+.16
Arteriosclerosis	**38**	28	+10	**.57**	.42	+.15
Heart disease	**357**	234	+123	**5.32**	3.51	+1.81
Nephritis, chronic	**100**	56	+44	**1.49**	.84	+.65
Infant and Maternal Mortality:						
a. Total registered live births	**1,296**	1,181	+115	**19.31**	17.73	+1.58
b. Registered stillbirths	**38**	30	+8	**.57**	.45	+.12
Stillbirths per 1,000 births and stillbirths				**28.48**	24.77	+3.71
c. Deaths of mothers from causes incident to childbirth	**6**	12	—6	**.09**	.18	—.09
Deaths of mothers per 1,000 births and stillbirths				**4.50**	9.91	—5.41
Deaths of children in first year of life	**128**	95	+33	**1.91**	1.43	+.48
Deaths in first year per 1,000 live births,				**98.76**	80.44	+18.32
Violence:						—
Accidents	**39**	48	—9	**.58**	.72	—.14
Homicides	—	5	—5	—	.07	.07
Suicides	9	9	—	**.13**	.13	—
Miscellaneous:						
Alcoholism, acute or chronic	**16**	8	+8	**.24**	.12	+.12
Broncho-pneumonia	**202**	51	+151	**3.01**	.76	+2.25
Cancer	**131**	127	+4	**1.95**	1.91	+.04
Cirrhosis of the liver	**5**	3	+2	**.07**	.04	+.03
Diabetes mellitus	**33**	12	+21	**.49**	.18	+.31
Diarrheal diseases, children under two years of age	**15**	7	+8	**.22**	.10	+.12

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	—	7	—7	—	.10	—.10
Deaths.	—	1	—1	—	.015	—.015
Cerebrospinal meningitis.....Cases..	3	2	+1	.04	.03	+.01
Deaths.	4	1	+3	.06	.015	+.045
Diphtheria.....Cases..	145	110	+35	2.16	1.65	+.51
Deaths.	6	5	+1	.09	.075	+.015
Influenza.....Cases..	1,968	14	+1,954	29.32	.21	+29.11
Deaths.	78	4	+74	1.16	.06	+1.10
Measles.....Cases..	55	1,576	+1,521	.82	23.66	—22.84
Deaths.	1	8	—7	.015	.12	—.105
Pneumonia (lobar).....Cases..	449	178	+271	6.69	2.67	+4.02
Deaths.	152	70	+82	2.26	1.05	+1.21
Scarlet fever.....Cases..	312	369	—57	4.65	5.54	—.89
Deaths.	3	2	+1	.04	.03	+.01
Tuberculosis (pulmonary).....Cases..	136	113	+23	2.03	1.70	+.33
Deaths.	71	53	+18	1.06	.79	+.27
Tuberculosis (other forms).....Cases..	20	36	—16	.30	.54	—.24
Deaths.	5	7	—2	.07	.10	—.03
Typhoid fever.....Cases..	1	7	—6	.015	.10	—.085
Deaths.	1	1	—	.015	.015	—
Whooping cough.....Cases..	130	348	—218	1.95	5.22	—3.27
Deaths.	2	8	—6	.03	.12	—.09

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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CHILDREN'S SUMMER CAMPS.

Some Advice to Parents.

Camp life for children, in summer, is increasing in popularity. Parents tend to look upon the summer camp as offering them a relief from the care of their children during the summer vacation and at the same time as securing for the children a benefit to their health which could not be attained at home.

This latter presumption may not be justifiable. During the past few years, the attention of the Boston Health Department has been called with increasing frequency to conditions in summer camps, both within and outside the state, because sickness contracted in camp has been brought back to the city.

Menaces to health in camps have been disclosed to an extent that leads the Boston Health Department to make this effort to impress upon parents the desirability of making the selection of a summer camp for their children a matter of more serious concern.

It is not describing the situation any too strongly to state that in many camps there is a notable lack of any intelligently directed precautions to safeguard the children's health. When children escape contagious diseases in camp it is more often due to immunity or good luck than to effective measures to prevent them. Systematic routine practices which would actually prevent the

spread of communicable diseases are exceptional in children's camps, but these exceptions furnish splendid demonstrations of the practicability of effective precautions.

In other respects, also, the management of children's camps furnishes striking contrasts in the matter of a correct appreciation of the responsibilities involved. Official experience in camp inspection would indicate that those in charge of the best managed camps are eager to listen to new ideas and suggestions. Official inspections disclose also exemplifications of the dangerous tendency of a "little knowledge," of carelessness, of indifference and of a frankly hostile resentment of any suggestions.

Communicable diseases are not the only thing to be thought of when young animals or young human beings are brought together in considerable numbers. Lack of proper supervision over the activities of children, failure to provide arrangements which will assure needed rest may make camp life exhausting rather than beneficial. Children who return home in apparently good health may also soon demonstrate that they have had their vitality impaired and their resistence to infection lowered by ill-advised selection of food, by food unsuitable to individual needs, by poor cooking and by injurious dietary habits.

There is an entirely unjustifiable presumption that life in the open in the summer time makes it permissible to disregard sanitary and hygienic precautions which would be admitted to be necessary at other times and under different conditions. It is true that certain common communicable diseases "of childhood," so called, tend to be less prevalent during the warmer months of the year, but the living conditions which make this so are somewhat changed when children are crowded together in camps. Then, too, hot weather in itself not only increases opportunity for infections of another sort, but increases bodily susceptibility to them. It is not to be forgotten that infantile paralysis is a summer disease.

For the reasons above stated parents, before making a selection of a summer camp for their children, should assure themselves that at the camp of their choice a reasonably adequate provision is made to safeguard the children's health in every respect.

With the average parent the matter of cost is an important consideration. While higher rates for a summer camp give no assurance of better health protection for the children, it is to be remembered that the factors which make for a healthful camp environment cost money and that food which is really nutritious is expensive. Sickness is also expensive and the camp which offers the lower rate may prove the more costly in the end.

In order to judge of the adequacy of precautions for safeguarding health in a children's camp, a parent would do well to

look to a citizens' training camp under regular army control as offering the minimum standards for health protection in camps.*

While a children's camp calls for precautions which may be omitted in a military camp, no health protective measures which it is customary to observe in the latter can be disregarded in a children's camp.

Furthermore, a parent should not assume that he knows from his military experience during the World War, the scope of the precautions for the protection of health in a military training camp today, nor that all safeguards will be apparent on a superficial personal inspection of a military camp.

In attempting to judge of the adequacy of the safeguards of health in the camp to which he proposes to commit his children, the parent might well take up the various features of camp sanitation and hygiene, one by one, and find out how their requirements are met at a military camp and then compare the methods of meeting the same requirements at the children's camp. The features to be considered in the selection of a camp for children and the nature of the inquiry with respect thereto may be suggested by the following:

Water.— What is the source of drinking water at the camp? Has it the approval of any official agency? How is a possible occasional or accidental pollution guarded against after the camp is occupied?

Milk.— What is the source of the supply? Is it subject to the inspection of any official health agency? What has been the bacteriological count of the milk? Is it pasteurized or boiled before it is given to the children?

Excreta Disposal.— What provision is made for the reception and disposal of human excreta? If a camp latrine, how is it protected against flies? If a camp "pit latrine" is provided, why cannot deep "post-hole latrines" be substituted therefor? If an efficient septic tank of sufficient capacity is not provided, why not? How is the prevention of contamination of the water supply by human excreta assured?

Garbage.— What provision is made for the disposal of garbage? Does the method prevent the access of flies to the garbage? Garbage is dangerous, in so far as it is allowed to attract and breed flies.

Flies.— What provision is made to prevent the access of flies to the kitchen and the children's food?

It is to be remembered that the practical danger of flies is due to the fact that they mechanically contaminate food with disease germs which they pick up on their feet. Such dangerous

* This subject is considered in The Army Medical Bulletin No. 15, Published at the Medical Field Service School, Carlisle Barracks, Pennsylvania.

germs are derived chiefly from human excreta. The diseases which may thus be spread are typhoid fever, dysentery and various other intestinal infections, including the causes of "common summer diarrhea." Flies may also be factors in the spread of tuberculosis and, it is even possible, of diseases characterized by involvement of the nervous system, of which infantile paralysis is an example.

Medical Examination.— Is any medical examination made of children before they are admitted to camp with a view to detecting acute contagious diseases or such contagious sequellae as discharging ears, or cranial sinuses, running or sore noses, or "trench mouth," or lice, itch, ringworm, impetigo or other parasitic or fungoid contagious skin affections? If such an examination is made, how does the camp management assure itself that the physician has looked for each one of all the conditions specifically mentioned above, and that he has actually taken the child's temperature at the time of making the examination.

Medical Inspections, Examinations and Service.— A parent, whose patronage of a camp is solicited, may properly ask the two following questions and insist on satisfactory answers: What assurance have I that my child will receive timely and appropriate treatment if he meets with an accidental injury or develops appendicitis or some other acute illness? What assurance have I that my child will be intelligently protected against acute contagious diseases or contagious skin affections while in camp?

Experience has shown that neither arrangements with a competent practicing physician in the vicinity, nor the constant employment of a trained nurse or physician, or both, within the camp itself can be accepted as an entirely satisfactory and conclusive answer to either of these questions.

Appropriate care of sick children and the prevention of the spread of contagious diseases depends upon the prompt recognition of symptoms of sickness or of visible abnormalities. This is entirely a matter of camp organization. Experience has shown that proper safeguards to health are not assured by the presence or availability of physicians or nurses. On the other hand, it does not require a medical education or a nurse's training to recognize constitutional symptoms of sickness or visible abnormalities or to take a child's temperature with a clinical thermometer.

The first essential to the maintenance of the health of persons in camp is a suitably equipped place where a person can be removed and contact with others prevented, whether directly or indirectly, through bedding, towels or eating or drinking utensils.

The second essential is a camp organization which makes it somebody's regular duty to maintain a constant surveillance over a

certain, not too large, group of specified individuals with a view to the detection of symptoms of sickness,— and additional to any formal daily inspections.

By whom such a surveillance is directly maintained is unimportant so long as lack of appetite at meal time, indisposition to play, drowsiness, a cough, pallor, flushing suggestive of fever, or other cutaneous abnormality, results automatically in the immediate isolation of the child in the quarters provided for the purpose and in a written record of its bodily temperature.

The automatic isolation of persons with symptoms of sickness directs the attention of the camp to them, makes additional trouble in caring for them and otherwise tends to a prompt investigation by a physician, who may be less likely to take chances with a person whom he finds isolated with a temperature than if his attention had been called to the same person while still mingling with others. A physician will be very unlikely to release from isolation a person with an elevation of temperature from an unknown cause.

Moreover the only hope of preventing the spread of contagious diseases lies in regarding any symptoms of sickness as symptoms of a contagious disease until proved otherwise. All acute contagious diseases, including typhoid fever, scarlet fever, measles, diphtheria, whooping cough, etc., are contagious before a diagnosis can be made, and while the only symptoms will be lassitude and a slight elevation of temperature.

The most contagious stage of whooping cough is the week or two before the person begins to whoop. By the time the whoop appears the contagious period of whooping cough is half over.

It ought also to increase the confidence of a parent in the management of a camp to learn that it is the practice to take the temperature of children daily for two weeks as a routine procedure after their admission to camp. Acute infections, contracted and undiscoverable before admission, may manifest themselves after admission and a regular afternoon rise in temperature may lead to the discovery of some unsuspected chronic infection.

Vaccination.— A parent will presumably see that his child is vaccinated against smallpox and typhoid fever before sending a child to a camp without being required to do so by the camp management.

Dishwashing Practices.— A parent may properly ask a camp management what means are taken to assure the effective sterilization of eating and drinking utensils.

If a parent goes to a military training camp, he will find that after the eating and drinking utensils, including cups and glasses, have been washed they are put in a wire basket and left for some

time in boiling water in a receptacle which is kept over the fire and when removed, they are so hot that they dry without wiping. Many diseases varying in seriousness from scarlet fever to mild sore throats and colds, and including intestinal infections, are spread by eating and drinking utensils which have been contaminated, either directly by persons, or by contaminated dish water.

Military camps find it necessary as a health protective measure to sterilize "mess gear." Dangers from "mess gear" doubtless increase with the size of a camp, but no reasonable excuse can be offered for failure to sterilize "mess gear" in any camp.

A parent may also pertinently inquire what means are taken to see that the children wash their hands before eating.

Among the diseases which have shown a tendency to appear in children's camps is infantile paralysis. A great deal still remains to be learned about the manner of transmission of this disease, but we do know that infection may take place with food or drink through the mouth, and it certainly cannot be considered unreasonable for a camp which takes children to promote their health to adopt well recognized precautions to prevent the contamination of food and drink from human or animal sources or by insects.

Drinking Cups and Towels.— The dangers of common drinking cups and towels became long ago so apparent that they are now forbidden by statutory law in most states. Official inspection has disclosed practices in some camps which make it advisable to suggest to a parent that he find out what the practice is likely to be in the camp which solicits his patronage.

Food.— Of all the factors which go to determine a child's health or ill health, food is the most important. Furthermore, suitable food for a human being whose digestive powers and assimilation processes are continually being influenced by environment, by bodily conditions and by emotional states, is a far different proposition from stoking a furnace or feeding laboratory animals.

When a child returns home from camp increased in size, tanned and looking healthy, but who with the passing of the autumn, shows a vulnerability to infections and lack of physical stamina in general, the most probable cause is lack of suitable food during the summer.

This may or may not be the fault of the food supplied at the camp, or what is equally important, the way in which it was cooked and served. The child may have come to camp with cranky eating habits or a perverted appetite which led him to avoid articles of food in the camp fare essential to his proper nutrition. He may have had peculiarities of his digestive apparatus or food idiosyncrasies which caused potentially nutritious articles of food to give

rise in him to poisonous products. He may have habitually been sent dainties from home which left him no appetite for the camp meals.

It is not reasonable for a parent to expect a camp to assure a proper diet for an abnormal child without a specific understanding to that effect, but a parent should regard it of utmost importance to see that the camp fare actually supplied is such as accumulated practical experience with the food of real human beings over long periods and that which has been gained by the medical profession in the treatment of nutritive and digestive disorders, would indicate to be capable of providing for the natural growth and for the maintenance of the vitality of a reasonably normal child.

There are several very practical considerations which a parent may well take into consideration in this connection.

There is no danger that a child will be overnourished in a summer camp. Our universe is so constituted that the most nutritious food is the most expensive. Whether the camp be run for profit or be dependent on charitable contributions, considerations of economy may be confidently relied upon to prevent any possible dangers to a child of a too highly protein diet. There is, however, a distinct danger that supposed scientific knowledge may serve as an excuse for subjecting children to a dietary régime which may not only fail in actual practice to provide them with suitable nourishment, but may load them up with material that is positively harmful. Parents should not be overawed by dogmatic assertions as to what constitutes a proper diet for human beings. Important additions to our knowledge of nutrition have been made in recent years. There have also been stupid and unfortunate misapplications of this knowledge and this article is written in the light of actual personal experience with such results.

For information regarding a satisfactory diet for human beings we are not dependent entirely upon laboratory experiments. From military experience alone much has been learned and then there is the vast store of information accumulated by the clinical experience of physicians in the treatment of digestive derangements and nutritive disorders. Before allowing himself to be persuaded that the diet which his children is receiving in a summer camp is adequate and wholesome, he should consider the following facts.

The value of a food depends upon other factors besides its theoretical calories and vitamines. The varying assimilative capacity of different individuals and of the same individual in different physical and mental states, and the consistency of the food, and the combinations in which it is eaten are among the factors also to be taken into account. The nutritive value of any food may be destroyed by bad cooking. The character and consistency of the bread supplied in a

camp is a matter of primary practical importance. If a pretence is made that the camp diet has been figured out accurately from the theoretical caloric value and vitamin contents of the foodstuffs to meet exactly all dietary needs of children, and especially if there be an observable attempt to make the food for every meal or even every day represent a "balanced ration," then the parent may justifiably assume that the children in that camp are not getting enough to eat.

Liquids may be too freely prescribed for children. The needs of normal children for liquids are not met by forcing into them so many glasses of water and of milk a day. Their needs will vary with the amount of water evaporated from their skins as perspiration, and from their lungs. Their need will vary with their activity and the temperature and relative humidity of the atmosphere,— and will be increased by a diarrhea. Thirst is not to be disregarded as an index of a child's need of liquids.

The excessive dilution of the digestive secretions is conducive to functional disorders and predisposes to infections of the digestive apparatus for reasons which are as well appreciated in clinical medicine as the desirability of an adequate supply of liquids.

Parents should not regard inability to secure fresh milk as an objection to a camp. Cow's milk is a much advertised beverage. It also owes some of its popularity to the fact that it serves as a convenient means of stopping a child's demand for food. Cow's milk supplies to a child whose teeth have developed nothing which cannot be equally well if not better supplied in some other way. To meet the real food demands of an active normal well-grown child would call for a quantity of milk beyond the capacity of his digestive apparatus to handle. Moreover, individual idiosyncrasies rendering cow's milk positively harmful are more common among human beings than is generally realized. On the other hand, a fact which likewise calls for practical consideration is that cow's milk even in moderate quantity may furnish a child with desirable nutritive elements which the child might not otherwise get, and, therefore, for a child with whose digestion cow's milk seems to agree, may serve as a useful adjunct to his diet, provided the milk be safe, and no milk except pasteurized, or cooked milk, is absolutely safe.

Human beings cannot live on cow's milk alone. Certain characteristic digestive disturbances and nutritive disorders are always to be watched for when a diet consisting chiefly of milk is prescribed in medical practice. There is a real reason why "milk sop" has come to be applied to a boy or a man lacking in vitality and virility. Parents should note whether or not milk is being used as an economical "filler" for children in camp.

Cow's milk, in combination with other articles, is successfully employed to stimulate the growth of chickens and other animals which it is customary to market by weight at early maturity. Similar combinations will stimulate the growth of children. Rapidity of growth in plants and animals and in children is often accompanied by the development of vital weaknesses. Whether this may or may not be an unavoidable result, experience has long shown that a rapid increase in size in a child gives no assurance of a corresponding increase in vitality and ability to resist infections.

The stress now being laid on vegetables in a child's diet is a reflection of laboratory experiments with rodent animals. Like liquids, the use of vegetables and of fruits calls for caution in a child's diet. The ability of the human digestive apparatus to get good out of coarse vegetables even when properly cooked has marked limitations. The limitations are even more marked when it comes to raw vegetables and fruits. It is questionable to what extent even lettuce is actually digested by the average child. Some idea of probable intelligence in the use of vegetables may be gained by observing what is done, or not done, to conserve the inorganic salts and other constituents leeched out of vegetables in the process of boiling.

If digestion is proceeding normally, the intestines need only a certain food bulk to enable them to function properly. If they are not doing so, there is some cause, physical or dietary, which is not going to be removed, but only aggravated by irritating the digestive tract with indigestible vegetables, fruit or "breakfast foods." There is no more reason for scratching the mucous membranes of the excretory tract of a child with sharp oxalate lime crystals, formed by a combination of the oxalic acid in his spinach and an excessive intake of lime, than there is in giving him cocktails.

Then there are various vegetables, fruits and berries, which offer valuable nutritive possibilities, but which it is safer to exclude from menus in children's camps because children are not likely to masticate them properly. For example, the exclusion of green corn from any summer camp will save trouble for everybody concerned.

Parents owe it as a duty to their children to visit them in camp and see what they actually are getting to eat. Parents should ask themselves how they would like to live on the same diet themselves. They would always do well to compare a children's camp dietary with the prescribed army ration, which has been dictated by experience with human beings as well as by deductions from laboratory observations. Above all, in camp or out, parents should see that their children in this climate actually eat a liberal amount of meat. Parents need not fear that children will get too much meat. The

cost will take care of that matter. Perhaps the properties of meat which promote vitality and resistance to infection may be supplied in some other way, but the professional practice of physicians in this region indicates that such needs are not likely to be otherwise met. Moreover, plenty of meat tends to check an over consumption of sweets and starches.

Meat does not necessarily mean sirloin roasts. Cheap stews will bring up the hemoglobin in the blood of the anemic bread eating European peasants with astonishing rapidity. A human being cannot live long on cow's milk alone, but he may live indefinitely and do hard work if he will eat the whole cow,— muscle, tripe, liver, kidneys, brains, heart and bone marrow. It is no longer hearsay to question the teaching that meat is responsible for rheumatism, high blood pressure, arteriosclerosis and Bright's disease.

Recently secured information has shown beyond fear of further contradiction that those Eskimos who live the whole year beyond the reach of a mixed civilized diet, who benefit from direct sunshine only during the clear days of a few months, and who live exclusively on meat except for an estimated annual per capita consumption of four ounces of vegetable matter, nevertheless do not suffer from rickets, scurvy, or decaying teeth, nor from cranial developmental defects associated with adenoids, enlarged tonsils or other respiratory obstructions.

The men who have converted United States and Canada from a wilderness into what they are today have been meat eaters and the children of fathers and mothers who have eaten meat and lots of it. Many of them lived to be as old as anybody now lives and if some actuaries who ought to know what they are talking about are to be believed, the expectation of life in the last century after a person had reached fifty years, was better than that of persons who now attain that age in spite of the fact that progress in surgery has brought about an enormous reduction in the mortality from conditions from which people in the fifth, sixth and seventh decades of life formerly died.

During the past two decades valuable discoveries have been made in the physiology of nutrition. It has been learned how to prevent by diet alone certain diseases whose cause was formerly a mystery. Knowledge of some aspects of nutrition is still, however, in an unsatisfactory state and those who are most dictatorial in telling us what we should eat may not be the best qualified to advise. A satisfactory diet for any collection of human beings will always call for some experimenting with the particular beings themselves. It is a matter which cannot be determined by considering solely the theoretical nutritive possibilities of various foodstuffs. Climatic

and living conditions, the activities of the human beings, their previous dietary habits, their access to foodstuffs which may be harmful in amount, if not in intrinsic character, are among the variable factors which enter into the problem. To be of practical help in feeding such a collection of human beings, one should be trained to recognize clinical signs of anemia and intestinal indigestion as well as to give a parrot-like recital of the caloric value and vitamine contents of bread, beans, carrots and cabbage. If a parent visits a camp or a school and finds that children are being furnished food which he would not want to try to live on himself, he may properly inquire whether the supposed adequacy of the diet is based on human experience or on experiments with laboratory rats which die of senile debility at three years of age.

THE EYESIGHT OF CHILDREN.

The United States Public Health Service has published a reprint (No. 1235) from the United States Public Health Reports of July 6, 1928, entitled "A Special Study of the Vision of School Children." The methods and results of this study have been presented in a way that deserves the attention of everyone engaged in child welfare work, including school teachers, to whom it is customary to delegate the "eye testing" of children. The report includes a remarkably clear and concise exposition of the physiology of the eye and the physics of light.

The following are the important features brought out by this survey:

1. The simple Snellen test reveals but a small percentage of the actual number of refractive errors in children.

2. The myopic eye is nearly always discovered with the use of the simple Snellen test.

3. The hyperopic eye is rarely found with the simple Snellen test, and then only the very severe types are revealed.

4. The astigmatic eye may be found with the simple Snellen test. Of course the simple Snellen test does not reveal the type of visual defect; it shows only that certain eyes can read only certain letters at a specified distance.

5. The frequency of myopia tends to increase between the seventh and twelfth years. This is very important, as myopia may develop rapidly. For this reason all school children should have the simple Snellen test twice a year.

6. Of the 66 per cent of eyes which read 20/20 or better and appeared normal, 32 per cent read 20/50 or worse when a cycloplegic

was used, thus indicating that many eyes work under a handicap. Nearly one fifth of all the children tested 20/100 or worse after the cycloplegic.

7. The hyperopic eye tends to improve with advancing school age.

8. The myopic eye tends to grow worse with advancing school age.

9. These results emphasize the necessity for regular annual examination of eyes which are known to be defective.

SUMMARY OF WORK, FEBRUARY, 1929.

ADMINISTRATION DIVISION.

Prosecutions ordered	2	Settlements:	
Legal notices	87	Total cases	87
Forcible removal	1	Notices	80
Lying-in hospitals approved	2	Bills	20
Notice to vacate	1	Personnel:	
Contract awarded	1	Permanent appointments	2
		Trip authorized	1
		Retirement	1
		Transfer	1
		Resignation	1

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,334	Oleomargarine	1
Denatured alcohol	6	Wagon	1
Hen license	1	Dumps	4
Ice cream manufacturer	1	Milk	127
Ice cream dealers	353	Pedlers	21
Manicure-massage	25	Garbage transportations	6
Pasteurization of milk	1	Dump permit revoked	1

MEDICAL DIVISION.

Reported cases	1,660	Visits:	
Nonresidents	71	By V. D. investigator	294
Deaths investigated	18	By medical inspectors to cases of communicable disease	487

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	975
Tuberculosis	411
Typhoid	23
Gonorrhea	799
Gonorrheal ophthalmia	83
Syphilis	1,054
Other examinations *	246
Bacteriological examinations of milk	643
Dark field	2
Genito urinary T. B.	13

* Urines, 236; Vincent's angina, 1; fudge for B. Coli, 1; cultures for virulence, 8; swimming pools examined, 64.

FOOD DIVISION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk, sold in Boston by wagon dealers and chain stores, during February, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Boston Medical Milk Commission which may be sold either raw as Certified Milk, or pasteurized as Certified Milk — Pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.40	3.83	9,000
Antetomasso, Peter	12.21	3.68	12,000
Brandley, F. J. & P. J.	12.69	3.85	5,700
Buxton, William E.	13.09	4.78	29,000
Casey, James	12.80	3.92	14,000
Cashin, James F., & Co.	12.53	3.85	32,500
Cedar Hill Farm, Inc.	12.45	3.78	29,000
Chapin, George L.	13.02	4.02	18,000
Clark, Levi	12.47	3.80	28,000
Corkery, John J.	12.32	3.83	12,000
Cosgrove, Martin S.	12.83	3.88	12,500
Cummings, Francis S., Company	12.17	3.66	20,000
Daley, John	12.36	3.75	18,000
Dean, Louis W.	13.45	4.23	1,675
Deerfoot Farms Company	12.77	4.00	19,000
Denehy, Timothy	12.49	3.58	6,000
Driscoll, William B., Company	12.63	3.93	21,500
Edgerly, Frank S.	12.71	4.03	30,500
Elm Spring Farm Company	12.31	3.70	42,500
Ferguson, Malcolm D.	12.77	4.25	40,500
Garfield, Mason	14.53	5.63	7,400
Garvin, Charles	15.15	5.67	16,000
Giroux, J. E. & H. J.	12.38	3.75	40,000
Griffin, Joseph L.	12.92	3.92	16,500
Gushee, Chester W.	12.82	3.88	20,500

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Hampden Creamery Company	13.10	3.75	39,000
Herlihy Bros., Inc.	12.32	3.70	21,000
Hickey, James B.	12.68	4.13	22,500
Holden, John E.	12.44	3.73	18,000
Hood, H. P., & Sons, Inc.	12.45	3.80	16,500
Hutchinson, Frank T.	12.37	3.70	4,250
Jones, William T., Company	12.77	4.05	16,000
Kendall Brothers	12.42	3.68	6,600
Kingston, Samuel	12.87	3.78	6,550
Knapp, George J.	12.29	3.73	11,500
Lang Brothers	12.69	3.77	51,500
Larsson, Charles	12.24	3.67	26,500
Lyndonville Creamery Association	12.87	3.93	18,500
Manning, Harriet	12.09	3.40	26,000
McAdams, J. F., & Brothers, Inc.	12.60	3.83	17,000
McKernan, James	12.37	3.73	15,000
Munchback, Albert W.	12.87	3.98	8,750
New England Creamery Products Company	12.64	3.83	12,500
Pine Grove Dairy, Inc.	12.86	3.98	975
Robinson, A. J.	13.24	4.20	10,500
Schuster, Adam	12.45	3.82	34,000
Seven Oaks Dairy Company	12.71	3.81	10,000
Shick, Jacob	12.58	3.62	64,000
Somerset Farms Creamery Company	13.44	4.38	15,000
Sterling Farms Milk Company	12.87	3.89	9,000
Stone, H. L.	12.49	3.88	5,200
Stuart, W. E., Company	12.78	3.88	5,650
Turner Centre System	12.57	3.81	22,000
United Farmers' Co-operative Creamery Company	12.72	3.95	12,000
Vartanian, K.	12.52	3.75	31,000
Vartanian, S.	12.18	3.60	21,000
Walker-Gordon Laboratory Company	12.65	3.95	3,700
Weiler, E., & Sons	12.86	4.19	25,500
Westwood Farms Milk Company	12.54	3.80	17,500
White Brothers	12.67	3.90	13,500
Whiting Milk Companies	12.36	3.74	11,000
Whittemore, W. D.	13.00	3.95	12,500
Williams, Edward C.	13.06	4.29	49,000
Wiswall, Granville A.	12.22	3.60	46,000
Woodland, Charles L.	12.80	4.20	4,800

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.51	3.85	15,000
Brown, M., & Sons.....	Whiting Milk Companies...	12.27	3.70	75,000
Cloverdale, The, Company.....	Turner Centre System.....	12.62	3.82	16,000
Economy Grocery Stores Company.	Whiting Milk Companies...	12.34	3.81	15,000
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	13.03	4.00	14,000
Morgan Brothers Company....	New England Creamery Products Company.	12.75	4.02	13,000
Winer, M., Company.....	M. Winer Company.....	12.87	3.99	72,000

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Antetomasso, Peter.....	12.88	4.35	7,000
Cosgrove, Martin S.....	13.43	4.45	20,000
Cummings, Francis S., Company.....	12.82	4.20	8,000
Dean, Louis W.....	12.81	4.00	16,500
Elm Spring Farm Company.....	12.79	4.08	8,900
Griffin, Joseph L.....	13.16	4.13	13,500
Herlihy Brothers, Inc.....	12.51	4.13	19,000
Hood, H. P., & Sons, Inc.....	12.71	4.16	8,850
Jones, William T., Company.....	13.32	4.28	5,400
McAdams, J. F., & Brothers, Inc.....	12.84	4.25	11,000
New England Creamery Products Company.....	13.10	4.10	14,000
Robinson, A. J.....	13.38	4.35	12,500
Seven Oaks Dairy Company.....	13.04	4.08	8,000
Sterling Farms Milk Company.....	13.73	4.88	15,500
Turner Centre System.....	13.45	4.48	6,400
Weiler, E., & Sons Company.....	12.97	4.28	19,500
White Brothers.....	12.96	4.50	11,000
Whiting Milk Companies.....	12.73	4.05	14,000
Woodland, Charles L.....	13.04	4.30	3,200

CERTIFIED MILK.

Raw milk produced, bottled and sealed at the farm under the supervision of the Boston Medical Milk Commission. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Barron, C. W	14.74	5.40	1,800
Cedar Hill Farm, Inc	13.28	4.35	3,125
Cummings, Francis S., Company	12.36	3.55	2,000
Hood, H. P., & Sons, Inc	13.61	4.50	1,775
New England Creamery Products Company	12.55	3.80	5,750
Walker-Gordon Laboratory Company	12.57	4.00	3,600
Whiting Milk Companies	13.04	4.23	2,300

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for Certified Milk. Produced, bottled, sealed and pasteurized under the supervision of the Boston Medical Milk Commission.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Cedar Hill Farm, Inc	12.16	3.55	3,300
Hood, H. P., & Sons, Inc	13.38	4.28	275

MILK INSPECTION — SAMPLES EXAMINED.

Chemical:

Milk from wagons	353
Milk from stores	754
Milk brought by citizens	12
Vinegar	49
Ice cream	3
Miscellaneous examinations	13
Samples referred to Bacteriological Laboratory for examination	643
Court cases	14
Fines	$95

HEALTH UNITS INCREASING.

The number of health units created through the munificence of the late George Robert White already number three, and in addition there is the original health unit in Boston still functioning at 17 Blossom street, and the other in the South End section of the city, where the new Out-Patient Department building of the Boston Sanatorium Department has been converted into a real, fully equipped health unit. Thus the total is now five.

The trustees of the White Fund have recently acquired land in a central location in Charlestown, at the corner of High and Elm streets, where the next health unit will be erected for the people of that section of the city. It is expected that the old structures that are now on the land will soon be removed to make way for this modern miniature health department.

In the Roxbury section of the city, at the corner of Savin street and Blue Hill avenue, the trustees of the White Fund have purchased a building that is admirably suited for the functions of a health unit, and after alterations are made within the building it will compare favorably with any of the existing health units now operating. The taking over of this building will expedite the addition to the complete chain of health units contemplated by the trustees of the White Fund.

DAIRY DIVISION.

Total services	1,477	Total cattle inspected	2,704
Dairies inspected	189	Inspections of milk plants and licensed dealers	314
Scoring above 50*	143	Bacteriological examinations	480
Scoring below	46	Country creamery inspections	13
With milk rooms	158	Sediment tests	473
Without milk rooms	31		
Inactive	4		

FOOD INSPECTION DIVISION.

FEBRUARY, 1929.

District inspections	2,058
Reinspections	372
Market inspections	1,125
Terminal inspections	1,380
Vehicle inspections	3,819
Stand inspections	1,507
Complaints	28
Notices to abate	105
Defects remedied	1,175

Condemnations:

Meat	239 pounds	Vegetables	161,297 pounds
Fruit	782 pounds	Fish	7 pounds
Nuts	2,812 pounds	Dairy products	6,511 pounds

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* Passable mark.

ABATTOIR DIVISION.

Cattle inspected	2,759	Parts condemned (lbs.)	13,179
Calves inspected	4,126	Animals condemned	50
Swine inspected	4,474		

SANITARY DIVISION.

Original inspections	1,859	Complaints investigated	511
Reinspections	5,927	Nuisances abated	1,437
Legal notices served	86		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	16	175	116	291	29	31	60
East Boston	8	86	116	202	14	19	33
North End	8	43	112	155	9	16	25
West End	7	61	49	110	12	12	24
South Boston	4	92	55	147	20	17	37
Boston Dispensary	11	34	10	44	8	5	13
Brighton	4	15	11	26	1	5	6
Charlestown	3	22	14	36	2	1	3
Codman square	3	69	64	133	7	15	22
Hyde Park	4	39	59	98	11	9	20
Totals	68	636	606	1,242	113	130	243

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	34	30	278	179
East Boston	22	5	80	58
North End	19	5	58	54
West End	12	9	—	—*
South Boston	34	8	200	38
Boston Dispensary	—	—	—	—
Brighton	—	—	—	—*
Charlestown	—	—	—	—*
Codman square	—	—	—	—*
Hyde Park	—	—	—	—*
Totals	121	57	616	329

* No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING FEBRUARY, 1929.

Classification.	Number.	Percentage.
After death	11	21.59
Seven days or less	6	11.76
Eight to fourteen days, inclusive	2	3.92
Fifteen to twenty-one days, inclusive	2	3.92
Twenty-two to thirty-one days, inclusive	5	9.80
Within First Month. (Total)	26	50.99
Within second month	6	11.76
Within third month	2	3.92
Within fourth month	6	11.76
Within fifth month	—	—
Within sixth month	1	1.96
Within seventh month	—	—
Within eighth month	—	—
Within ninth month	2	3.92
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	43	84.31
Within second year	3	5.88
Within third year	2	3.92
More than three years	3	5.88
Grand totals	51	99.99

WHEN HOUSE HUNTING, THE FOLLOWING QUESTIONS SHOULD BE BORNE IN MIND:

Is every living room provided with sufficient window space to insure good light and ventilation?

Are the walls clean, and is the paper and paint in good condition?

Are toilet and bathing facilities handy, and is the apartment clean and well ventilated?

Is the plumbing in good condition, and are the fixtures open?

Are all the rooms free from dampness?

Is the cellar concreted, dry, clean, whitewashed and properly ventilated?

Are the hallways well ventilated, clean and lighted day and night?

Is there a good yard or piazza where children can play?

What are the means of escape in case of fire, and are any stables or offensive businesses nearby?

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, February, 1929.

Inspections made	385
Physical examinations	68
Schick test	2
Toxin-antitoxin administrations	45
Vaccinations given	112
Vaccination certificates issued	32
Visits to day nurseries	45

TOXIN-ANTITOXIN INJECTIONS AND VACCINATIONS, FEBRUARY, 1929.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	1	1	1	3	—
31 Lincoln street, Brighton	—	—	1	1	—
Charlestown Municipal Building	—	3	4	7	2
Codman Square Library	4	4	9	17	10
Columbia Road Municipal Building	—	1	1	2	9
1 Arcadia street, Dorchester	2	6	8	16	6
East Boston Health Unit	—	—	—	—	2
Hyde Park Municipal Building	—	—	—	—	8
Curtis Hall, Jamaica Plain	—	—	—	—	2
41 North Margin street	1	—	—	1	—
Roslindale Municipal Building	6	4	5	15	1
Children's Hospital	4	2	1	7	6
1049 Columbus avenue	—	—	—	—	11
Vine Street Municipal Building	1	—	—	1	2
133 Dorchester street, South Boston	2	—	—	2	—
122 Tyler street	1	2	3	6	1
Shawmut Avenue Municipal Building	—	—	2	2	5
57 East Concord street	—	—	1	1	1
17 Blossom street	3	3	3	9	—
Totals	25	26	39	90	66

MONTHLY REPORT OF CHILD HEALTH CONFERENCES, FEBRUARY, 1929.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	163	11	174	22	—	22	4	44
31 Lincoln street, Brighton	26	4	30	—	2	2	3	10
Charlestown Municipal Building	201	41	242	23	6	29	8	30
Codman Square Library	247	40	287	48	1	49	8	36
Columbia Road Municipal Building	363	15	378	40	—	40	8	47
1 Arcadia street, Dorchester	151	20	171	21	1	22	8	21
East Boston Health Unit	197	19	216	34	7	41	8	27
Hyde Park Municipal Building	138	19	157	13	1	14	7	22
Curtis Hall, Jamaica Plain	144	13	157	19	1	20	4	39
41 North Margin street	126	24	150	20	4	24	7	21
Roslindale Municipal Building	244	40	284	29	1	30	4	71
Children's Hospital	120	6	126	21	1	22	4	32
1049 Columbus avenue	146	10	156	23	5	28	8	20
Vine Street Municipal Building	253	11	264	50	2	52	7	38
133 Dorchester street, South Boston	208	39	247	33	12	45	7	35
122 Tyler street	90	16	106	9	—	9	3	35
Shawmut Avenue Municipal Building	112	13	125	11	1	12	4	31
57 East Concord street	40	4	44	11	1	12	4	11
17 Blossom street	216	35	251	31	—	31	8	31
Totals	3,185	380	3,565	458	46	504	114	32

DENTAL ACTIVITIES AT HEALTH UNITS.

FEBRUARY, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	649	569	.....	679	636	3,023
Number of treatments by dentists	1,750	1,019	.....	951	642	5,272
Number of treatments by hygienist	69	151	.....	195	112	549

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

FEBRUARY, 1929.

BOSTON DISPENSARY:

Calls by district physician	289

BOSTON LYING-IN HOSPITAL:

Number prenatal clinics	20
Total attendance	225
New cases	57

COMMUNITY HEALTH ASSOCIATION:

Homes visited	10,574
Cases referred	747
Diseases reported	32
Number of meetings of mothers' club	18
Attendance	285

STATE DEPARTMENT OF MENTAL DISEASE:

Number of clinics	4
Attendance	16
Number new cases	5

CHILDREN'S HOSPITAL:

Number of clinics	5
Attendance	43
New cases	2

BOSTON HEALTH DEPARTMENT:

Refraction Service:

Number of refractions	100
Number diagnoses	100
Glasses prescribed	31
New cases	34

Nose and Throat Service:

Number of clinics	3
Attendance	206
Number of meetings of mothers' club	4
Attendance	11

Family Welfare Society:	
Number of staff meetings	8
Attendance	83
American Red Cross:	
Number home nursing classes	4
Attendance	32

NURSING DIVISION.

Homes Visited		14,766
Child Hygiene:		
Visits to new cases	1,214	
Visits to old cases	9,306	
Total		*10,520
Communicable Diseases:		
Visits to new cases	775	
Visits to old cases	1,695	
Total		†2,470
Tuberculosis:		
Visits to new cases	213	
Visits to old cases	3,710	
Total		‡3,923
Miscellaneous:		
Infant death investigations	68	
Maternal death investigations	6	
Patients accompanied to hospital	11	
Visits to day nurseries	48	
Visits to parochial schools	403	
Total		536
Total number of visits		17,449

	Hrs.	Min.
Hours at station by nurses	4,042	50
Hours at baby and P. S. conferences	1,463	10
Hours at tuberculosis clinics	744	15
Total number of hours	6,250	15

* Includes 57 wrong addresses; 998 not seen; 1,055 absent visits.

† Includes 27 wrong addresses; 47 not seen; 74 absent visits; 242 ophthalmia visits.

‡ Includes 55 wrong addresses; 440 not seen; 495 absent visits; 1,782 positive; 926 contacts; 720 suspects.

VITAL STATISTICS, FEBRUARY, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING FEBRUARY, 1929, WITH COMPARATIVE FIGURES FOR FEBRUARY, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	1,187	1,037	+150	17.68	15.57	+2.11
Nonresidents deducted	967	857	+110	14.41	12.87	+1.54
By Age:						
Under one year	121	127	—6	1.80	1.91	—.11
One year to four years, inclusive	61	52	+9	.91	.78	+.13
Sixty years and over	548	425	+123	8.16	6.38	+1.78
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	55	59	—4	.82	.88	—.06
Arteriosclerosis	31	24	+7	.46	.36	+.10
Heart disease	224	226	—2	3.34	3.39	—.05
Nephritis, chronic	72	57	+15	1.07	.85	+.22
Infant and Maternal Mortality:						
a. Total registered live births *	1,079	1,097	—18	16.08	16.47	—.39
b. Registered stillbirths	24	37	—13	.36	.55	—.19
Stillbirths per 1,000 births and stillbirths	—	—	—	21.76	32.63	—10.87
c. Deaths of mothers from causes incident to childbirth	14	9	+5	.21	.13	+.08
Deaths of mothers per 1,000 births and stillbirths	—	—	—	12.70	7.94	+4.76
Deaths of children in first year of life	121	127	—6	1.80	1.91	—.11
Deaths in first year per 1,000 live births,	—	—	†	112.14	115.77	—3.63
Violence:						
Accidents	36	62	—26	.54	.93	—.39
Homicides	1	2	—1	.015	.03	—.015
Suicides	5	7	—2	.07	.10	—.03
Miscellaneous:						
Alcoholism, acute or chronic	11	8	+3	.16	.12	+.04
Bronchopneumonia	155	61	+94	2.31	.91	+1.40
Cancer	110	101	+9	1.64	1.52	+.12
Cirrhosis of the liver	8	6	+2	.12	.09	+.03
Diabetes mellitus	17	14	+3	.25	.21	+.04
Diarrheal diseases, children under two years of age	9	8	+1	.13	.12	+.01

* Figures for live births subject to increase. † Rate subject to change.

		CASES AND DEATHS.					
		Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
		1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:							
Anterior poliomyelitis	Cases	—	5	—5	—	.07	.07
	Deaths	—	—	—	—	—	—
Cerebrospinal meningitis	Cases	3	2	+1	.04	.03	+.01
	Deaths	3	2	+1	.04	.03	+.01
Diphtheria	Cases	92	96	—4	1.37	1.44	—.07
	Deaths	6	10	—4	.09	.15	—.06
Influenza	Cases	252	18	+234	3.75	.27	+3.48
	Deaths	20	4	+16	.30	.06	+.24
Measles	Cases	73	2,214	—2,141	1.09	33.24	—32.15
	Deaths	1	8	—7	.015	.12	—.105
Pneumonia (lobar)	Cases	724	240	+34	4.08	3.60	+.48
	Deaths	105	69	+36	1.56	1.04	+.52
Scarlet fever	Cases	303	343	—40	4.51	5.15	—.64
	Deaths	6	5	+1	.09	.07	+.02
Tuberculosis (pulmonary)	Cases	115	117	—2	1.71	1.76	—.05
	Deaths	51	46	+5	.76	.66	+.10
Tuberculosis (other forms)	Cases	21	30	—9	.31	.45	—.14
	Deaths	7	10	—3	.10	.15	—.05
Typhoid fever	Cases	2	3	—1	.03	.04	—.01
	Deaths	—	—	—	—	—	—
Whooping cough	Cases	93	300	—207	1.38	4.50	—3.12
	Deaths	4	5	—1	.06	.07	—.01

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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THE CONQUEST OF YELLOW FEVER — ITS LESSONS.

Congress has recently directed that there be published annually in the United States Army Register, as a roll of honor, the names of the members of our military establishment in Cuba in 1900 who exposed themselves to experimental infection in connection with the investigation that resulted in the discovery of the manner of transmission of yellow fever.

No such recognition has ever been given to others who have risked or even sacrificed their lives in efforts to find ways of controlling a dreaded disease.

In no other instance has the disappearance of a disease so rapidly followed the discovery of methods to control it. Within twenty-five years, the only place in the Western Hemisphere where yellow fever was to be found was a small district in Brazil.

When the Reed Commission began its work, yellow fever was known to be endemic in Cuba and in many other countries of tropical America. In other places, yellow fever was recognized so frequently that they were suspected of being endemic foci of the disease. Among such seaports were New Orleans and Key West as well as Colon and Havana.

No other disease, not even the bubonic plague, ever acquired such commercial importance as yellow fever. This is the chief

reason why it disappeared so rapidly when effective methods for its control were found. Yellow fever was a constant handicap to commerce with the countries of tropical America and a block to their economic development. It was the terror of ship owners. Crews of ships would be stricken and die in tropical ports and in consequence ruinous wharfage and demurrage charges would pile up. Perishable cargoes would be lost by quarantine restrictions at ports of arrival. Whenever yellow fever appeared in places where it was not endemic and the native population not largely immune, business and commerce were paralyzed.

From time to time yellow fever spread to this country. There was an outbreak as far north as Kittery, Maine, in 1864. The disease was brought there with the U. S. S. "Esota." Both New York and Philadelphia have suffered from epidemics. In the latter city, in 1793, there was an epidemic which was attended with a frightful mortality. Our southern states naturally suffered more frequently and more severely. The most serious epidemic in the South occurred in 1877. This was probably the first time when negroes in this country were recognized to have yellow fever. They had been regarded as naturally immune. The last epidemic in the United States was in New Orleans in 1905. The same year the disease appeared in other places along the Gulf.

In robust American men, yellow fever has always been regarded as a very fatal disease. One who has not been through with the experience cannot conceive of the panic which appearance of yellow fever produced in a southern community which knew from experience what a yellow fever epidemic really meant. The following is a typical occurrence.

One evening in 1898 a United States officer landed at Pensacola, to take the train for Washington the next day. He went to the principal hotel for the night. In the morning he found that he and one other guest were the only persons in the hotel. The day before, yellow fever, which was known to be present in Biloxi and Mobile, had been discovered in Pensacola. The officer managed to get aboard a train crowded with fugitives for Atlanta. At every station a local shot-gun quarantine guard prevented persons from leaving the train. Yellow fever had never spread in Atlanta and the city did not quarantine against it. Yellow fever was likewise unknown in Petropolis, near Rio de Janeiro, a notorious hotbed of the disease.

Aside from its high mortality, a case of yellow fever was in itself frightful. It struck down the healthy in a mysterious way. There would be indications of recovery, then would come the portal obstruction, the horrible prostration, the turning of the patient's

color from yellow to mahogany, the black vomit and death. All was over in four or five days.

The dread of yellow fever served to encourage the unusual measures which led to the discovery of the manner of its transmission. Officers and men of our army found themselves in Cuba and confronted with the task of governing the country and protecting themselves against unfamiliar disease which was making their lives uncomfortably insecure. When the "Yellow Jack" got an American, he expected to die. As a military official once said to the writer, "You never heard of an army officer who had reached the rank of Major who ever recovered from the yellow fever."

In keeping with the commonly accepted idea that the disease was directly or indirectly related to filth, Colonel Waring, the Street Commissioner of New York, came down to Havana to eradicate yellow fever by "cleaning up the city." He did a good job, but nobody in Havana was deceived by the published reports of his success in checking yellow fever.

Colonel Waring's name appears on no army honor roll, but he sacrificed his life in the fight against yellow fever. On returning from his work, he was taken ill. The old-time "yellow fever experts" acquired by clinical experience an uncanny ability to recognize a case of yellow fever in its prodromal stage from what they called the "yellow fever *facies*." Such an expert, Dr. Joseph H. White, of the U. S. Marine Hospital Service, as the U. S. Public Health Service was then known, was asked to see Colonel Waring. After a glance at the patient, Doctor White did not hesitate to confirm the suspicions nor to tell us that the Colonel was doomed; that recovery in a person of his age and *habit* was unknown.

At times, for a century at least, various persons had advanced the theory of the responsibility of mosquitoes for yellow fever with such insistence that their ideas have been recorded in medical literature. The most conspicuous exponent of this idea when Major Reed undertook his experiments was Dr. Carlos J. Finlay. The work of Ross and Manson and others had just resulted in demonstrating the mosquito transmission of malaria and had naturally created a more favorable attitude toward Doctor Finlay's views of a mosquito vector in yellow fever.

Major Reed did not concern himself with the cause of the disease. His experiments were directed to its practical control. The infective agent of yellow fever was then popularly endowed with all the elusive attributes that we are now accustomed to hear ascribed to both vitamines and filterable viruses plus the diffusibility of liquid carbon dioxide. The body of a person who had died of yellow fever

was an object of horror, to be buried immediately with disinfectants and not to be disinterred. The water of Havana Harbor was believed to be capable of giving rise to yellow fever. It was regarded as dangerous to take the harbor water aboard ships even on anchor chains. To avoid anchoring, mooring buoys were placed about Havana Harbor to which vessels could make fast. That is why the ill-fated "Maine" on arrival was taken by the pilot to buoy No. 4. *Fomites*, articles which had been in contact with a yellow fever patient, were regarded as extremely dangerous.

Major Reed's volunteers were first put in beds and in bedding in which yellow fever patients had died. Nothing happened. Volunteers then allowed themselves to be bitten by mosquitoes which had bitten yellow fever patients. Nothing happened either. This was done repeatedly with the same negative results. The experiments barely escaped being abandoned before it was discovered that a patient is infective only during the first three days of the disease and that after securing the infective material it is about twelve days before the mosquito becomes capable of infecting a human being. There was some luck also in the selection of the right kind of mosquitoes in the experiment.

Important as the above-mentioned discoveries were in simplifying quarantine procedure, yellow fever would never have been eradicated from tropical America but for another discovery, not in pathology, but in entomology. The dangerous mosquitoes were to be found in the vicinity of their victims or prospective victims. Other habits were also discovered which were utilized in devising methods for their destruction and protective measures against them.

It is just beginning to be realized that the practical solution of many local malarial problems is likewise dependent upon intelligently directed entomological studies of the mosquitoes involved. Spectacular and expensive oiling or spraying with poisonous dust of large areas are beyond the economic resources of most malaria-stricken communities and have perhaps nowhere justified their cost. Industrial effectiveness during the construction of the Panama Canal was due to the insistence on the use of mosquito screens and to the prompt and effective administration of quinine when malarial infection appeared and not because of the destruction of mosquito vectors of malaria and lack of opportunities for infection.

The pathological concept which underlay former methods to control yellow fever finds expression in the statutory law on which the Boston Health Department still relies for legal authority to function today. It dates from 1797 and reads as follows: "The board of health shall examine into all nuisances, sources of filth and

causes of sickness within its town, or on board of vessels within the harbor of such town, which may, in its opinion, be injurious to the public health," etc.

A concrete example of the application of this idea to the control of yellow fever is furnished by the advice to the public formulated by the "College of Physicians" of Philadelphia during the yellow fever epidemic in that city in 1793. It reminds us of the advice which was given to the public during the prevalence of influenza the past winter. It reads in part as follows:

"That all unnecessary intercourse should be avoided with such persons as are affected by it (yellow fever).

"To stop the tolling of bells and to bury such persons as die in as private a manner as possible.

"To place persons infected in the center of large and airy rooms, in beds without curtains, and to pay the strictest regard to cleanliness, by frequent changing of body and bed linen.

"To keep the streets and wharfs as clean as possible.

"As the contagion of the disease may be taken into the body and pass out of it without producing the fever, unless it be rendered active by some occasional cause, the following means should be attended to, to prevent the contagion being excited into action in the body.

"To avoid all fatigue of body or mind.

"To avoid standing or sitting in the sun, also in a current of air, or in the evening air.

"To accommodate the dress to the weather and to exceed in warm rather than in cool clothing.

"To avoid intemperance, but to use fermented liquors such as wine, beer and 'cyder' with moderation.

"The College conceive fires to be very ineffectual, if not dangerous means of checking the progress of this fever. They have reason to place more dependence upon the burning of gun powder. The benefits of vinegar and camphor are confined chiefly to infected rooms and they cannot be used too frequently upon handkerchiefs, or in smelling bottles by persons whose duty calls them to visit or attend the sick."

Medical opinion attributed the origin of the epidemic to a pile of damaged and rotting coffee on the Arch Street Wharf.

The idea of the responsibility of the mosquito for yellow fever was long in receiving serious consideration. How could such a theory be regarded as tenable in view of evidence to the contrary of which the following are samples? In the yellow fever epidemic of 1877 Memphis suffered severely. The first *recognized* case in

the city was of a woman who had received through the mail a lock of hair cut from the head of a relative who had died of yellow fever in New Orleans.

Yellow fever epidemics, like those of infantile paralysis, were expected to abate in the autumn with the appearance of frost. Frost, however, apparently might fail to destroy the virus of yellow fever. The U. S. S. "Plymouth" which had had yellow fever aboard and was brought to Boston and allowed to freeze up there for two winters. When put in commission and sent south, cases of yellow fever (?) appeared aboard as soon as she entered the tropics, although she had not touched port since leaving Boston.

Then there was the old sloop-of-war "Portsmouth," on which yellow fever always appeared when she went in the West Indies. This ship certainly had hard luck.

A young man who had contracted yellow fever in Central America in 1896, and who managed to reach his home in Biloxi, Miss., before falling sick, started an epidemic there. The Federal officers came to the aid of the state and local health officials. The young man was identified as the original case, but it was found impossible to connect him with other cases evidently concerned in starting the epidemic, on the accepted theory of contact transmission of the disease, until it was discovered that members of the families involved had sat in proximity to each other in church. The incubation period of yellow fever fitted in beautifully. In an old government report the result of this epidemiological study is embellished by a diagram, full of little circles, joined by straight lines, for which the writer is responsible, and intended to show the disastrous consequences of attending church with persons who might have a case of yellow fever in their homes.

The writer had likewise personal cognizance of a case in which a soldier appropriated and slept in a blanket which, unknown to him, had been used by another soldier who had developed yellow fever. At the proper time, the man who had purloined the blanket came down himself with the disease.

As the convincing character of the testimony, of which the above are illustrations, is recalled, may it not be pardonable to entertain a suspicion that the lack of progress in the control of influenza, infantile paralysis, and other diseases which might be cited, may be attributable likewise to misinterpreted observations?

Practical benefits may follow from false hypotheses. It has occurred in connection with the practice of medicine. It happens in business and finance. The spread of yellow fever was checked by the consistent application of procedures based on the supposition that the disease was caused by emanations from sick persons and fomites. The spread of yellow fever by ships was prevented by

methods which came to be internationally approved. The essential features of the procedure were, on arrival of a ship from a dangerous or suspected port, to anchor the vessel well away from the shore and hold it there, fumigate it thoroughly with sulphur, and to permit nobody to leave it until the expiration of the period of incubation of yellow fever from the last conceivable opportunity for exposure. The sulphur dioxide was presumed to destroy any virus of yellow fever attached to the vessel, its personnel or cargo. Unintentionally, the mosquitoes were thus killed.

Information regarding health conditions at ports of departure was supplied by consular "bills of health," an idea which originated in somebody's brain in an Italian Republic back in the Middle Ages. We reinforced the scheme by placing medical representatives of our government at foreign ports, both with view to increasing the reliability of information regarding the local prevalence of contagious diseases and in securing the observance of certain prescribed precautions with respect to the clearance of ships for our ports.

After Congress enacted legislation in 1893, empowering the Federal Government to formulate and enforce maritime quarantine regulations, yellow fever never entered an American port except because of evasion or disregard of the requirements of these regulations. The old maritime quarantine procedure for keeping out yellow fever was efficacious, but it was an expensive and exasperating handicap to commerce and for that reason the action of local quarantine officials was sometimes determined by dictates other than those of law or of prudence.

The discoveries of the Reed Commission made it possible to put the maritime quarantine methods on a rational basis and made trade in perishable cargoes with infected tropical ports practicable. The new knowledge did not, however, prevent yellow fever from getting into this country occasionally. That happened for the same reasons as previously, and continued to do so until foci of yellow fever were eliminated from the tropics by taking advantage of entomological discoveries regarding the habits of the dangerous mosquitoes.

The Reed Commission did not discover the cause of yellow fever. We know that yellow fever is not produced by emanations from the sick nor does it come from fomites. We know that it is transmitted by a certain mosquito, but the real nature of the infective agent of yellow fever is still an interesting mystery.

For years various investigators studied the organs of yellow fever victims and infected mosquitoes under the microscope. They kept seeing about what they hoped to find, but their visions always had to be abandoned as illusory.

Finally, the Rockefeller Foundation took up the problem and after studying infective jaundice in which rats are concerned, the late Doctor Nogouchi undertook research directly on yellow fever which apparently demonstrated conclusively about ten years ago that yellow fever was likewise due to an organism known to bacteriologists as a *spirochete*.

The correctness of this view seemed to be further confirmed by the apparent artificial immunity to yellow fever produced when persons were exposed to the disease in Central American epidemics after having been given a vaccine prepared by the laboratory cultivation of Nogouchi's spirochete.

In white children in the tropics, yellow fever was usually a mild disease and often unrecognized. In negroes, also, yellow fever is so seldom a serious matter that for years they were believed to be naturally immune. There was a very old belief that yellow fever, like hookworm disease, was brought from Africa to the Western Hemisphere with the negro slave trade. Recent studies have tended to confirm this belief and with the eradication of yellow fever in the Western Hemisphere the Rockefeller Foundation, through its International Health Division, has been directing its attention to yellow fever in Africa. Investigation has shown that, as long believed, there exists in Western Africa a disease which is indistinguishable clinically or by other tests from the yellow fever of the Western Hemisphere, except that, to express the matter briefly, it does not appear to be due to Nogouchi's spirochete, nor does Nogouchi's vaccine seem to be effective in producing immunity to the African disease. The hypotheses of modern bacteriology have thus struck another snag. Doctor Stokes, Doctor Nogouchi himself, of the Rockefeller Foundation, and Doctor Young of the British Medical Service, have lost their lives trying to find out what is wrong. Others, fully realizing the risk, are stepping in to continue their work.

Many times in the past, when bacteriological hypotheses have thus encountered inconsistent facts, the hypotheses have been elaborated to meet the new situation. Some of us who have stood on the outside and watched, thinking of yellow fever, poliomyelitis, and influenza and the meager results of a definite, unqualified character which modern bacteriology has produced, feel inclined at times to view critically the unsatisfactory, confusing conclusions of types and strains, of virulence and avirulence, of susceptibility and immunity, to which bacteriological hypotheses have led, and wonder if what is really needed to clear up the mystery of yellow fever and other diseases is not a human mind with the capacity to see some simple underlying biological principle as yet unrecognized.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Bronchitis.

This important disease, both as a common affliction and as a cause of death, seems never to have received extended statistical consideration in this country. The census mortality reports do not subject the data to an extended and critical analysis, although approximately not far from 7,500 deaths from bronchitis, not complicated by pneumonia, occur annually in the United States registration area. The geographical distribution has also not been examined into with the required thoroughness. It is, therefore, a much neglected mortality factor demanding consideration. In 1926, the actual mortality from bronchitis in the registration area was 6,961 against 6,670 in 1925. The respective death rates were therefore 6.6 per 100,000 for 1926 and 6.5 for 1925. In 1926 the mortality from bronchitis was almost the same as that of cirrhosis of the liver and typhoid fever. For recent years the mortality and death rates from bronchitis have been as follows.

MORTALITY FROM BRONCHITIS, UNITED STATES REGISTRATION AREA 1920–27—RATES PER 100,000.

Year.	Acute.	Rate.	Year.	Chronic.	Rate.
1920	6,805	7.8	1920	4,804	5.5
1921	4,182	4.7	1921	3,832	4.3
1922	4,596	4.9	1922	4,144	4.4
1923	4,449	4.6	1923	4,366	4.5
1924	3,665	3.7	1924	3,542	3.6
1925	2,589	2.5	1925	2,414	2.3
1926	2,795	2.7	1926	2,391	2.3

MORTALITY FROM BRONCHITIS, ENGLAND AND WALES, 1919–26—RATES PER 100,000. (All Forms.)

Year.	Rate.	Year.	Rate.
1919	128 2	1923	85.2
1920	101.7	1924	97.3
1921	88.9	1925	90.6
1922	107.3	1926	77.3

It is shown by this comparison between the United States and England and Wales that the mortality from bronchitis is very considerably higher in the latter country. In 1926, in England and Wales, with a population of not quite forty millions, the actual mortality from bronchitis, not complicated by pneumonia, was a little over 30,000. In some years, however, or say 1916, it was in excess of 42,000. Comparing the rates for 1924, it appears that for

acute bronchitis the rate for the United States registration area was 3.7 against a rate of 21.5 for England and Wales, while for chronic bronchitis, the respective rates were 3.6 for the United States and 30.4 for England and Wales. In addition thereto, however, for England and Wales, other forms of bronchitis, unspecified, which apparently are not enumerated separately in the United States, had a rate of 36.0, making a total rate of 97.3 indicative of the enormous extent of bronchitis in fatal form in England and Wales compared with this country. No satisfactory explanation for this extraordinary state of affairs has been forthcoming. Even in England, bronchitis has never received thoroughly critical and extended consideration. Commenting upon the bronchitis death rate of 77.3 per 100,000 in 1926, the Medical Superintendent of the Registrar-General's Office observes in his annual report that the rates for 1926 are the lowest for any year since 1911, representing an enormous reduction from those of a few years earlier, even after allowance is made for the transfer of capillary bronchitis to broncho-pneumonia in 1921. This mortality has been falling since 1871–80, when the standardized rate was over 2,000 for each sex. In brief, the present rates are less than one third of those met with fifty years ago. It would be interesting to make a similar historical study of bronchitis for this country, or for one of the several states having records dating back to 1860.

The mortality from bronchitis falls particularly heavy upon ages under five, and ages forty-five and over. The reduction which has been observed in England affects all age periods, but this phase of the question cannot be enlarged upon. It is sufficient to call attention to the marked differences in the American and English death rates from bronchitis and the necessity for a more thorough study of the subject. As a contribution towards a better understanding, reference may be made to an address by Sir Aldo Castellani, Professor of Tropical Medicine, Tulane University, New Orleans, published in the *New Orleans Medical and Surgical Journal*, July, 1926. It is an outstanding contribution which should be consulted by those who are interested in the subject. Sir Aldo observes that for many years he has endeavored to call attention to the importance and comparative frequency of a group of parasitic bronchial and bronchoeveolar conditions which often closely simulate pulmonary tuberculosis. These conditions are separated into two large groups, (*a*) due to animal parasites or bronchozoiases; (*b*) due to vegetal parasites, broncho-mycoses. These are sub-classified by him in detail unsuitable for reproduction in this discussion. However, the observations of Sir Aldo have chiefly reference to the tropics. But the point raised by him as regards confusion with pulmonary tu-

berculosis is of great practical importance. In the earlier classification of pulmonary tuberculosis, chronic bronchitis was frequently included in the former. There are reasons for believing even at the present time that the diagnosis is often very superficially made and it may be that more chronic bronchitis is classified in this country as pulmonary tuberculosis than in England and Wales. But the fundamental reasons, in all probability, are climatic. Bronchitis is peculiarly a weather disease, and here again more extended observations are necessary for final conclusions.

Since this was written I have come in receipt of the statistics for 1927, which are as follows: Total mortality from bronchitis in 1927 was 5,851 against 6,961 deaths for the previous year. The respective death rates were 6.6 for 1926 and 5.4 per 100,000 for 1927. For acute bronchitis the death rate changed from 2.7 to 2.0 and for chronic bronchitis from 2.3 to 2.0, the remainder of the mortality being deaths from bronchitis under five years of age, not specified.

The English death rate from all forms of bronchitis increased from 77.3 per 100,000 in 1926 to 84.0 in 1927. The death rate from acute bronchitis increased from 20.0 to 22.2, while deaths from chronic bronchitis changed from 26.9 to 27.9. Nonspecified forms of bronchitis changed from a rate of 30.3 to 33.9.

STERILIZATION OF UTENSILS.

After careful consideration and as a result of many investigations, the Health Commissioner has concluded that the best way to insure a thorough sterilization of dishes, glasses, utensils and other equipment at soda fountains and in the smaller lunch rooms, is to use a double sink. In a general way the work of the two sinks may be classified as follows:

Sink No. 1 should contain water sufficiently hot to permit hand washing of equipment and have a chlorinated solution of a suitable strength. Upon completion of a careful cleaning in sink No. 1, glasses, dishes and utensils should be placed on a strainer in sink No. 2 and there subjected to an upward and downward spray of water at a temperature of about 180 degrees. For the downward spray a quarter-inch or half-inch hose with spray attachment and wire hand hold could be used. A particular type of strainer should be used with special application to glasses, cups, knives and dishes, with the dishes held on end, the silverware upright, and cups and glasses placed in such a manner as to be sprayed properly from underneath. At no time should standing water be allowed to accumulate in sink No. 2.

If fountains, particularly those for small dealers, were furnished with a double-sink arrangement, it would permit a more nearly perfect method of sterilization and result in benefit to the community. The use of sufficient temperature in the spray would eliminate the use of drying towels. Some of the larger places might find it advisable to supplement the above arrangement with an air-drying attachment.

SUMMARY OF WORK, MARCH, 1929.

ADMINISTRATION DIVISION.

Prosecution ordered	2	Personnel:	
Legal notices	159	Resignation	1
Settlements:		Death of employee	1
Total cases	120	Permanent appointments	3
Notices	90	Temporary appointments	6
Bills	30		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,269	Egg breaking	1
Ice cream dealers	698	Ice cream manufacturers	5
Hen licenses	367	Grease	5
Milk	255	Dump granted	1
Pedlers	95	Dump refused	1
Denatured alcohol	4	Garbage transportations	2
Manicure-massage granted	24	Day nurseries	2
Lying-in Hospital	1	Denatured alcohol licenses revoked	2
Goat license	1		

MEDICAL DIVISION.

Reported cases	1,782	Visits:	
Nonresidents	106	By V. D. investigator	311
Deaths investigated	13	By medical inspectors to cases of communicable disease	646
Vaccinations	355		
* Miscellaneous	805		

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	1,161
Tuberculosis	404
Typhoid	34
Gonorrhea	1,143
Gonorrheal ophthalmia	67
Syphilis	1,148
Other examinations †	255
Bacteriological examinations of milk	630
Dark field	7
Genito urinary T. B.	18
Malaria	1

* In connection with smallpox outbreak.

† Urines, 190; Vincent's angina, 1; fæces for B. typhocus, 1; urine for B. typhocus, 25; cultures for virulence, 5; swabs for organisms, 2; pie for organisms, 1; fæces for organisms, 1; oranges for organisms, 1; pancreas of cow for T. B., 1; culture for organisms, 1; clams for organisms, 1; urine for organisms, 1; swimming pools examined, 64.

FOOD DIVISION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk, sold in Boston by wagon dealers and chain stores, during March, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Boston Medical Milk Commission which may be sold either raw as Certified Milk, or pasteurized as Certified Milk — Pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than 72 hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.29	3.75	22,500
Antetomasso, Peter.	12.69	4.02	9,950
Barron, C. W.	14.14	5.03	9,000
Brandley, F. J. & P. J.	12.77	3.93	250
Buxton, William E.	12.30	3.60	8,750
Casey, James.	12.36	3.78	16,500
Cashin, James F., & Co	12.55	3.85	12,000
Cedar Hill Farm, Inc.	12.61	3.78	10,000
Chapin, George L.	12.76	3.90	13,000
Clark, Levy.	12.25	3.75	13,000
Corkery, John J.	12.39	3.75	14,500
Cosgrove, Martin S.	12.80	3.75	8,500
Cummings, Francis S., Company.	12.24	3.62	10,000
Daley, John.	12.41	3.65	7,200
Dean, Louis W.	13.31	4.13	11,000
Deerfoot Farms Company.	12.72	3.93	15,500
Denehy, Timothy.	12.53	3.60	20,000
Driscoll, William B., Company.	12.57	3.89	12,500
Edgerly, Frank S.	12.74	3.90	9,500
Elm Spring Farm Company.	12.29	3.82	14,000
Ferguson, Malcolm D.	12.82	3.78	13,000
Garfield, Mason.	15.29	5.83	15,500
Garvin, Charles.	14.95	5.53	11,000
Giroux, J. E. & H. J.	12.40	3.75	29,000
Griffin, Joseph L.	12.69	3.79	11,000

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, Chester W.	12.73	3.73	15,000
Hampden Creamery Company	12.74	3.68	42,500
Herlihy Brothers, Inc.	12.25	3.67	29,000
Hickey, James B.	12.45	3.85	11,000
Holden, John E.	12.52	3.78	10,000
Hood, H. P., & Sons, Inc.	12.45	3.81	9,500
Hutchinson, Frank T.	12.55	3.73	13,500
Jones, William T., Company	12.38	3.80	8,300
Kendall Brothers	12.17	3.48	15,500
Kingston, Samuel	12.40	3.62	12,500
Knapp, George J.	12.27	3.70	15,000
Lang Brothers	12.58	3.83	34,000
Larson, Charles	12.69	4.17	14,500
Lyndonville Creamery Association	12.63	3.84	11,500
Manning, Harriet	12.06	3.40	8,500
McAdams, J. F., & Brothers, Inc.	12.48	3.70	12,000
KcKernan, James	12.41	3.80	14,000
Munchback, Albert W.	12.61	3.87	10,500
New England Creamery Products Company	12.55	3.83	16,000
Robinson, A. J.	12.84	3.90	14,000
Schuster, Adam	12.25	3.73	38,500
Seven Oaks Dairy Company	12.62	3.75	5,200
Shick, Jacob	12.50	3.72	9,900
Somerset Farms Creamery Company	13.38	4.30	2,300
Sterling Farms Milk Company	12.75	3.61	17,500
Stone, H. L.	12.31	3.75	5,100
Stuart, W. E., Company	12.58	3.80	18,500
Turner Centre System	12.54	3.81	6,500
United Farmers Co-operative Creamery Company	12.73	3.99	5,300
Vartanian, K.	12.34	3.80	75,000
Vartanian, S.	12.86	4.30	13,000
Walker-Gordon Laboratory Company	13.03	4.20	6,200
Weiler, E., & Sons	12.54	3.94	14,500
Westwood Farms Milk Company	12.54	3.78	7,800
White Brothers	12.90	4.00	11,000
Whiting Milk Companies	12.36	3.74	12,000
Whittemore, W. D.	12.82	3.83	20,500
Williams, Edward C.	13.29	4.48	4,500
Wiswall, Granville A.	12.50	3.83	25,500
Woodland, Charles L.	12.34	3.70	1,600

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Atlantic & Pacific Tea Company, The Great.	Hood, H. P., & Sons, Inc...	12.55	3.88	21,000
Brown, M., & Sons.....	Whiting Milk Companies...	12.48	3.82	17,000
Cloverdale Company, The.....	White Brothers.....	12.71	3.82	27,000
Economy Grocery Stores Company.	Whiting Milk Companies...	12.32	3.75	14,000
First National Stores, Inc.....	Bellow Falls Co-operative Creamery.	12.52	3.95	11,500
Morgan Brothers Company....	New England Creamery Products Company.	12.47	3.82	24,000
Winer, M., Company.....	M. Winer Company.....	12.64	4.01	32,500

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than 48 hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Antetomasso, Peter.....	13.12	4.40	6,400
Cosgrove, Martin S.....	13.26	4.30	13,000
Cummings, Francis S., Company.....	12.80	4.15	8,000
Dean, Louis W.....	13.38	4.05	9,000
Elm Spring Farm Company.....	12.61	4.07	12,000
Griffin, Joseph L.....	13.11	4.15	2,300
Herlihy Brothers, Inc.....	12.38	4.05	9,500
Hood, H. P., & Sons, Inc.....	12.65	4.19	6,900
Jones, William T., Company.....	13.20	4.20	13,000
McAdams, J. F., & Brothers, Inc.....	12.72	4.30	1,800
New England Creamery Products Company.....	12.96	3.95	10,000
Robinson, A. J.....	13 36	4.20	19,000
Seven Oaks Dairy Company.....	12.94	4.00	4,600
Sterling Farms Milk Company.....	13.58	4.75	9,700
Turner Centre System.....	13.32	4.57	2,200
Weiler, E., & Sons.....	12.92	4.23	18,000
White Brothers.....	12.92	4.35	7,200
Whiting Milk Companies.....	12.71	4.05	19,000
Woodland, Charles L.....	12.94	4.25	1,400

CERTIFIED MILK.

Raw milk produced, bottled and sealed at the farm under the supervision of the Boston Medical Milk Commission. Fat content not less than 3.50 per cent, and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Barron, C. W.*				
Cedar Hill Farm, Inc.	Own	13.18	4.40	4,400
Hood, H. P., & Sons, Inc.	Own	13.38	4.32	4,300
New England Creamery Products Company.	Bellows Stock Farm	12.72	3.95	5,850
Turner Centre System	Alta Crest	12.64	3.80	600
Walker-Gordon Laboratory Company.	Own	12.70	4.08	6,650
Whiting Milk Companies	Walker-Gordon Hampshire Hills.	12.70	3.95	1,100

* Incorrectly listed in January and February surveys as certified by the Boston Medical Milk Commission.

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Boston Medical Milk Commission.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	11.79	3.33	2,400
Hood, H. P., & Sons, Inc.	Own	13.38	4.23	3,850

MILK INSPECTION — SAMPLES EXAMINED.

Chemical:	
Milk from wagons	383
Milk from stores	928
Milk brought by citizens	15
Vinegar	49
Ice cream	6
Water	2
Honey	1
Oleomargarine	1
Lobster liquor	1
Miscellaneous examinations	8
Samples referred to Bacteriological Laboratory for examination	630
Court cases	3
Fines	$40

PROTECT YOUR CHILDREN AGAINST DIPHTHERIA.

Do not Delay — Deaths from Diphtheria are Unnecessary.

Diphtheria is a very dangerous disease which caused 63 deaths in Boston in 1928. Many more than this number of children died in previous years before parents began to protect their children against diphtheria. Some who do not die after having had this sickness are left with heart disease.

Most of the deaths from diphtheria occur in young children, and it is very important that the protective treatment be given as soon as a baby is six months old. Every child should receive this treatment before it is five years old.

Delay is Dangerous — The Protective Treatment is Harmless.

If any child in your family, no matter what his age may be, is not protected, have it receive this treatment at once. Over 150,000 treatments have been given in Boston without any harmful result.

Bring your children to your family physician for diphtheria prevention treatment or to the stations of the Boston Health Department.

DAIRY DIVISION.

Total services	1,649	Total cattle inspected	5,274
Dairies inspected	291	Inspections of milk plants and licensed dealers	321
Scoring above 50 *	247	Bacteriological examinations	474
Scoring below	44	Country creamery inspections	13
With milk rooms	244	Sediment tests	542
Without milk rooms	47		
Inactive	8		

* Passable mark.

FOOD INSPECTION DIVISION.

MARCH, 1929.

District inspections	4,333
Reinspections	548
Market inspections	1,325
Terminal inspections	184
Vehicle inspections	5,861
Stand inspections	2,025
Complaints	39
Notices to abate	270
Case in court	1
Convictions	1
Fines	$10
Filed	–
Samples taken	10

ABATTOIR DIVISION.

Cattle inspected	2,724	Parts condemned (lbs.)	15,619
Calves inspected	6,832	Animals condemned	81
Swine inspected	4,215		

SANITARY DIVISION.

Original inspections	2,764	Complaints investigated	684
Reinspections	7,700	Nuisances abated	2,043
Legal notices served	162		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	17	240	142	382	47	27	74
East Boston	12	100	135	235	17	8	25
North End	11	42	107	149	4	9	13
West End	12	68	54	122	14	5	19
South Boston	10	72	73	145	12	22	34
Boston Dispensary	13	44	17	61	16	2	18
Brighton	6	17	9	26	10	4	14
Charlestown	8	23	29	52	5	6	11
Codman square	11	108	100	208	13	15	28
Hyde Park	7	31	41	72	5	9	14
Totals	107	745	707	1,452	143	107	250

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	34	33	267	204
East Boston	11	8	20	48
North End	11	11	57	82
West End	12	8	—	—
South Boston	18	10	87	49
Boston Dispensary	4	15	—	—
Brighton	6	10	—	—*
Charlestown	11	1	—	—*
Codman square	38	10	—	—*
Hyde Park	25	7	—	—*
Totals	170	113	431	383

* No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING MARCH, 1929.

Classification.	Number.	Percentage.
After death	10	19.23
Seven days or less	8	15.38
Eight to fourteen days, inclusive	2	3.85
Fifteen to twenty-one days, inclusive	4	7.70
Twenty-two to thirty-one days, inclusive	3	5.77
Within First Month. (Total)	27	51.93
Within second month	4	7.70
Within third month	1	1.92
Within fourth month	—	—
Within fifth month	1	1.92
Within sixth month	—	—
Within seventh month	3	5.77
Within eighth month	1	1.92
Within ninth month	—	—
Within tenth month	2	3.85
Within eleventh month	—	—
Within twelfth month	1	1.92
Within First Year Preceding Death. (Total)	40	76.93
Within second year	3	5.77
Within third year	2	3.85
More than three years	7	13.46
Grand totals	52	100.01

BACK NUMBERS.

The medical librarian of the General Library, University of Michigan, Ann Arbor, is desirous of securing the following back numbers of the "Monthly Bulletin." If any reader can oblige, the University will be grateful: Volume 9, Nos. 1–6, 8 and 10; Volume 10, No. 3; Volume 12, No. 5; Volume 13, No. 8.

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, March, 1929.

Inspections made	764
Physical examinations	141
Toxin-antitoxin administrations	129
Vaccinations	265
Vaccination certificates issued	22
Day nursery visits	61

TOXIN-ANTITOXIN INJECTIONS AND VACCINATIONS, MARCH, 1929.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	—	—	—	—	—
31 Lincoln street, Brighton	1	1	—	2	1
Charlestown Municipal Building	—	—	—	—	1
Codman Square Library	31	11	13	55	8
Columbia Road Municipal Building	—	—	—	—	26
1 Arcadia street, Dorchester	6	12	7	25	5
East Boston Health Unit	—	—	—	—	—
Hyde Park Municipal Building	2	1	1	4	3
Curtis Hall, Jamaica Plain	3	3	4	10	8
41 North Margin street	—	—	1	1	1
Roslindale Municipal Building	—	1	2	3	8
Children's Hospital	14	12	10	36	13
1049 Columbus avenue	—	—	—	—	11
Vine Street Municipal Building	—	—	—	—	8
133 Dorchester street, South Boston	—	2	2	4	1
122 Tyler street	1	1	1	3	2
Shawmut Avenue Municipal Building	2	1	—	3	9
57 East Concord street	4	4	3	11	—
17 Blossom street	4	3	—	7	3
Totals	68	52	44	164	108

MONTHLY REPORT OF CHILD HEALTH CONFERENCES, MARCH, 1929.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	214	9	223	34	—	34	4	56
31 Lincoln street, Brighton	68	8	76	10	3	13	4	19
Charlestown Municipal Building	239	22	261	31	4	35	8	33
Codman Square Library	301	41	342	51	3	54	8	43
Columbia Road Municipal Building	382	23	405	50	5	55	8	51
1 Arcadia street, Dorchester	192	19	211	33	1	34	8	26
East Boston Health Unit	296	32	328	62	3	65	8	41
Hyde Park Municipal Building	193	21	214	24	—	24	7	31
Curtis Hall, Jamaica Plain	210	17	227	30	1	31	4	56
41 North Margin street	163	34	197	22	—	22	8	25
Roslindale Municipal Building	222	40	262	23	4	27	4	67
Children's Hospital	170	5	175	23	2	25	4	44
1049 Columbus avenue	263	14	277	49	2	51	7	40
Vine Street Municipal Building	329	12	341	52	4	56	8	43
133 Dorchester street, South Boston,	289	74	363	53	25	78	8	45
122 Tyler street	95	10	105	8	—	8	4	26
Shawmut Avenue Municipal Building,	147	39	186	19	3	22	4	47
57 East Concord street	112	13	125	20	—	20	4	31
17 Blossom street	281	33	314	25	4	29	8	39
Totals	4,166	466	4,632	619	64	683	118	40

DENTAL ACTIVITIES AT HEALTH UNITS.

MARCH, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	759	685	727	600	754	3,525
Number of treatments by dentists	1,833	1,174	1,296	1,050	1,050	6,403
Number of treatments by hygienist	135	142	151	2	133	563

Cases referred by parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

MARCH, 1929.

BOSTON DISPENSARY:

Calls by district physician	361

BOSTON LYING-IN HOSPITAL:

Number prenatal clinics	21
Total attendance	272
New cases	69

COMMUNITY HEALTH ASSOCIATION:

Homes visited	11,215
Cases referred	612
Diseases reported	30
Number of meetings of mothers' club	20
Attendance	307

STATE DEPARTMENT OF MENTAL DISEASE:

Number of clinics	5
Attendance	31
Number new cases	4

CHILDREN'S HOSPITAL:

Number of clinics	8
Attendance	60

BOSTON HEALTH DEPARTMENT:

Refraction Service:

Number of refractions	223
Glasses prescribed	52
New cases	49

Nose and Throat Service:

Number of clinics	3
Attendance	182
Number of meetings of mothers' club	2
Attendance	31

NURSING DIVISION.

Homes Visited		12,155
Child Hygiene:		
Visits to new cases	1,549	
Visits to old cases	10,606	
Total		*12,555
Communicable Diseases:		
Visits to new cases	916	
Visits to old cases	1,995	
Total		†2,909
Tuberculosis:		
Visits to new cases	181	
Visits to old cases	4,424	
Total		‡4,605
Miscellaneous:		
Infant death investigations	76	
Maternal death investigations	6	
Patients accompanied to hospital	20	
Visits to day nurseries	54	
Visits to parochial schools	487	
Special visits	2	
Total		645
Total number of visits		20,314

	Hrs.	Min.
Hours at station by nurses	3,951	50
Hours at baby and P. S. conferences	1,571	5
Hours at tuberculosis clinics	923	10
Total number of hours	6,446	5

* Includes 102 wrong addresses; 1,200 not seen; 1,302 absent visits.

† Includes 19 wrong addresses; 87 not seen; 106 absent visits; 220 ophthalmia visits.

‡ Includes 36 wrong addresses; 533 not seen; 569 absent visits; 2,048 positive; 1,113 contacts; 875 suspects.

Most persons who contract pneumonia have had colds.

Colds are never to be neglected. Their proper care should include the avoidance of crowds where people may be scattering pneumonia germs.

VITAL STATISTICS, MARCH, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING MARCH, 1929, WITH COMPARATIVE FIGURES FOR MARCH, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	**1,083**	1,129	—46	**16.14**	16.95	—.81
Nonresidents deducted	**871**	917	—46	**12.98**	13.77	—.79
By Age:						
Under one year	**94**	157	—63	**1.40**	2.36	—.96
One year to four years, inclusive	**39**	66	—27	**.58**	.99	—.41
Sixty years and over	**470**	427	+43	**7.00**	6.41	+.59
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**71**	68	+3	**1.06**	1.02	+.04
Arteriosclerosis	**36**	24	+12	**.54**	.36	+.18
Heart disease	**204**	241	—37	**3.04**	3.62	—.58
Nephritis, chronic	**57**	51	+6	**.85**	.76	+.59
Infant and Maternal Mortality:						
a. Total registered live births *	**1,222**	1,341	—119	**18.21**	20.13	—1.92
b. Registered stillbirths	**22**	36	—14	**.33**	.54	—.21
Stillbirths per 1,000 births and stillbirths †	—	—	—	**17.68**	26.14	—8.46
c. Deaths of mothers from causes incident to childbirth	**15**	22	—7	**.22**	.33	—.11
Deaths of mothers per 1,000 births and stillbirths †	—	—	—	**12.06**	15.98	—3.92
Deaths of children in first year of life	—	—	—	**1.40**	2.36	—.96
Deaths in first year per 1,000 live births†,	**94**	157	—63	**76.92**	117.08	—40.16
Violence:						
Accidents	**32**	41	—9	**.48**	.61	—.13
Homicides	**1**	2	—1	**.015**	.03	—.015
Suicides	**8**	8	—	**.12**	.12	—
Miscellaneous:						
Alcoholism, acute or chronic	**12**	7	+5	**.18**	.10	+.08
Bronchopneumonia	**83**	91	—8	**1.24**	1.37	—.13
Cancer	**120**	94	+26	**1·79**	1.41	+.38
Cirrhosis of the liver	**9**	8	+1	**.13**	.12	+.01
Diabetes mellitus	**19**	27	—8	**.28**	.40	—.12
Diarrheal diseases, children under two years of age	**7**	12	—5	**.10**	.18	—.08

* Figures for live births subject to increase. † Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	1	1	—	.015	.015	—
Deaths.	1	—	+1	.015	—	+.015
Cerebrospinal meningitis.....Cases..	5	4	+1	.07	.06	+.01
Deaths.	3	1	+2	.04	.015	+.025
Diphtheria.....Cases..	116	110	+6	1.73	1.65	+.08
Deaths.	2	3	—1	.03	.04	—.01
Influenza.....Cases..	71	13	+58	1.06	.19	+.87
Deaths.	9	6	+3	.13	.09	+.04
Measles.....Cases..	86	2,241	—2,155	1.28	33.65	—32.37
Deaths.	3	20	—17	.04	.30	—.26
Pneumonia (lobar).....Cases..	254	253	+1	3.78	3.80	—.02
Deaths.	78	94	—16	1.16	1.41	—.25
Scarlet fever.....Cases..	367	360	+7	5.47	5.40	+.07
Deaths.	4	7	—3	.06	.10	—.04
Tuberculosis (pulmonary).....Cases..	128	140	—12	1.91	2.10	—.19
Deaths.	52	58	—6	.77	.87	—.10
Tuberculosis (other forms).....Cases..	36	34	+2	.54	.51	+.03
Deaths.	6	8	—2	.07	.12	—.03
Typhoid fever.....Cases..	1	5	—4	.015	.07	—.055
Deaths.	1	—	+1	.015	—	+.015
Whooping cough.....Cases..	128	291	—163	1.91	4.37	—2.46
Deaths.	—	9	—9	—	.13	—.13

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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Rec'd JUN 6 1929 P. P. L.

SUMMER CARE OF INFANTS.

Now that the summer is at hand more attention must be given to the care of infants at home, because during the hot weather a large number of unnecessary and avoidable deaths occur.

During the coming months there is a noticeable increase in the number of deaths of infants who die from diarrheal diseases and other disorders that are peculiar to infants at this time of the year.

Extreme care should be given the foods that are given the infant to eat, and not to overfeed it, especially with articles that are of a perishable nature, on account of the harmful effects of heat upon food, and this is particularly true of cow's milk. Incidentally, breast milk is the best food at all times. It is the cheapest and safest food, and much trouble will be avoided if the mothers will feed their infants at the breast. Hot weather brings with it bowel disturbances in bottle-fed infants, therefore extreme care should be taken to use milk that is fresh, and if you think you cannot breast-feed your baby, consult your doctor before putting it on the bottle. If cow's milk is used be sure that it is clean, pasteurized milk that has been prepared according to your physician's directions. Avoid overfeeding infants at all times. Nursing and not weaning is the proper thing in hot weather.

The baby should have plenty of fresh air, preferably in the open.

It should have some direct sunshine but not too much. If unable to get out on the sidewalk use the porch, and be sure that the baby does not become overheated, and that flies and mosquitoes are kept from it. Refrain from overclothing the baby — a cotton undershirt will serve as a covering and allow the child's arms and legs to be free and uncovered. Let the baby lie on a clean, firm surface, and not on a pillow or heap of clothes. The diaper will not be necessary except to place under the baby. To keep the baby cool on hot days give it its regular bath, and once or twice during the day a sponge bath of cool water to which baking soda has been added. Plenty of cool, boiled water is best for drinking purposes, and abstain from giving it ice water.

Flies and Sick Babies.

Some time ago the Bureau of Public Health and Hygiene of the New York Association for Improving the Condition of the Poor conducted an inquiry, in cooperation with the Department of Health, into the relation between the presence of flies in houses and the occurrence of diarrhea in infants. An effort was made to determine whether flies, under these circumstances, were the chief carriers of the germs of diarrhea, or whether house dirt and artificial feeding were more prominent factors in this condition.

The cases were divided into a fly-protected group and a fly-exposed or control group. These were made as similar as possible. Nurses visited the infants every five days. The fly-exposed control cases received the usual instruction in child hygiene work, but elimination of the house fly was not emphasized. In the protected group, protection of the baby as far as possible from contact with flies was made a pronounced feature, and constant use of netting was insisted on at all times. In this campaign more than 1,000 yards of netting were given to families in the protected group. The preliminary results of the survey showed that almost twice (1.9) as many infants were attacked by diarrhea from fly-exposed as from fly-protected infants. Aside from the influence of flies it was learned that almost twice as many infants were subjected to diarrheal attacks in dirty homes as in clean homes. Artificial feeding, however, was found to be a most important factor of child mortality. About two and one half (2.4) as many infants were attacked by diarrhea as among those breast-fed. The combined influence of dirt and flies was found to be nearly equal to that of artificial feeding, even in fairly good surroundings. Almost two and one half (2.4) times as many fly-exposed infants in dirty homes were attacked by diarrhea as were the fly-protected infants in clean homes. Dirt and artificial feeding were found to be a combination which made life extremely

difficult for the infant. More than one out of two were attacked with diarrhea. Surveys and studies such as this are impressive in the fact that they prove that diseases in children are often caused by such common factors as flies, dirt and artificial feeding.

A RÉSUMÉ OF INFANT DEATHS IN 1928.

The total number of infants who died under one year of age last year in Boston numbered 1,446, compared wtih 1,455 for the previous year. The rate was 77.11 against 76.29 per 1,000 births for 1927. The apparent paradox of a less number of deaths showing an increased death rate is due to the decreased number of births reported. Deducting nonresident infant deaths and nonresident births the infant rate for actual residents was 74.60 for 1928 compared with 72.94 for the year before. There were 4,220 nonresident live births (or 22.5 per cent of the total births) and 362 nonresident infant deaths for the year as compared with 3,894 nonresident live births (or 20 per cent of the total) and 348 nonresident infant deaths for the year 1927. Boston's nonresident infant death total exceeds that of any other city in the country.

Analysis of Infant Deaths.— Deaths due to "prematurity," the leading cause of infant deaths, were 341, deaths from bronchopneumonia numbering 250 was next, and deaths from diarrhea and enteritis, 200, followed. These three causes, therefore, were responsible for 54.7 per cent of the total infant deaths. As stated there were 1,446 deaths for the year under one year of age. Of this number 264 lived less than a day, 82 lived one day but less than two days, and there was a total of 513 that died before they reached the age of one week, a percentage of 35.5 of the total infant deaths.

Births in Hospitals.— Of the total number of live births registered — on which the infant death rate is based — for the year, 18,751, there were 12,534, or 66.84 per cent, born in hospitals, as against a percentage of 62.4 in 1927; 58.1 in 1926; and 53.9 in 1925, showing a constant annual increase in the number of infants born in hospitals in this city; 98.30 per cent of the nonresident infants born in Boston were delivered in hospitals. This total was 4,147 for the year.

SMALLPOX.

The beginning of smallpox is no different from that of the grippe or a bad cold. It starts with a headache, backache and other aches, and very likely there are chills and vomiting, as well as considerable fever, which will keep the patient in bed for a day or two or longer. After about the third day the fever practically disappears and the bed holds attraction no longer. The sick man feels better, gets up

from his bed, and probably goes to his work and tries to make up for lost time. He notices that he is breaking out with pimples,—first they appear on his forehead and wrists, but they do not bother him.

If the person has ever been vaccinated he may have only a mild case of smallpox and may never experience any further trouble from his pimples and never think of smallpox until health officials are trying to find out who has been spreading the disease in the community. It is often the case that such a thing happens and the spreader is located after he has recovered and is then harmless, but the damage has been done.

Most persons who get smallpox are, however, not so fortunate. Usually, after the supposed grippe lets up, and the person feels fairly well for a few days, the pimples become thick and troublesome, and the person again feels sick. The really serious stage of the disease now begins.

There are several reasons why smallpox tends to spread so rapidly. It is very contagious, even in the mild types, and is contagious before the pimples appear and until the last scab is gone. A mild case of smallpox is very likely to be mistaken for chicken-pox, and persons who do not know they have the disease are often well enough to travel about for a few days, yet they are in a very contagious stage of the disease. Vaccination is the safeguard for them and for those with whom they come in contact. The recent outbreak in this state and in other communities should serve as a warning.

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection?

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

PUBLIC HEALTH INSTITUTE.

The Third Public Health Institute, for health officers and other public health workers, will be held as usual at the Massachusetts Institute of Technology from June 24 to July 3. The Institute is conducted by the Department of Biology and Public Health of the Institute of Technology, with the cooperation of the Metropolitan Life Insurance Company, and has the cooperation of the Massachusetts Association of Board of Health.

This Institute aims to provide for the health officer or other qualified public health worker an opportunity to study public health procedures and to examine modern public health practices under the direction of experts in the respective fields.

Medical practitioners frequently spend brief periods with advantage in observation and study at great clinical centers. The Public Health Institute hopes to provide an equally valuable type of experience for health officers, public health nurses, and others actively engaged or interested in public health work. It will have as its main purpose, intensive instruction in the essential principles and the presentation of the best methods of modern practice in some of the important aspects of public health work.

Meetings will be held six days a week for three weeks. Mornings will usually be devoted to lectures and round table discussions or conferences on the subject matter under consideration. In the afternoons there will be laboratory exercises, clinical demonstrations or field trips.

Since the aim of the work is to assist in promoting scientific public health practice in this country, a nominal fee of only $40 will be asked. A limited number of awards of free tuition may be made in exceptional cases. For attendance for less than three weeks, a charge of $2.50 per day will be made.

Certificates of attendance will be given upon request.

Registration.

Application for this work should be addressed to the Registrar, Massachusetts Institute of Technology, and, if possible, such application should be made by June 15. Registration forms will be sent to each applicant, and these blanks may be returned by mail or may be presented on the first day of the session. Fees are payable in advance to H. S. Ford, Bursar.

For further information regarding the Public Health Institute, address Prof. S. C. Prescott, Department of Biology and Public Health, Massachusetts Institute of Technology, Cambridge, Mass.

RULES AND REGULATIONS.

Pertaining to the Use of the Common Drinking Cup and Common Towel in Factories, Workshops, Manufacturing, Mechanical and Mercantile Establishments.

(*State Department of Labor and Industries.*)

On and after May 1, 1929, it shall be unlawful to provide a common towel or a common drinking cup in any factory, workshop, manufacturing, mechanical or mercantile establishment in this commonwealth.

The term "common drinking cup" as used in these regulations shall be construed as meaning any vessel used in conveying water to the mouth and available for common use by the employees.

The term "common towel" as used in these regulations shall be considered to mean a roller towel or towel available for use by more than one person without being washed after such use.

"PENALTY."

Whoever violates any reasonable rule, regulation, order or requirement made by the department under authority hereof shall be punished by a fine of not more than one hundred dollars for each offense. (Chapter 149, section 180, General Laws.)

COMMON DRINKING CUP REGULATION.

The above regulation is in addition to the existing regulation of the State Department of Public Health which provides that it shall be unlawful to provide a common drinking cup:

(*a*) In any public park, street or way.

(*b*) In any building or premises used as a public institution, hotel, theater, public hall or public school, or in any part of any factory, market, office building, or store of any kind which is open to the general public.

(*c*) In any railroad station, railroad car, steam or ferry boat.

The term "common drinking cup" as used in these regulations shall be construed to mean any vessel or utensil used for conveying water to the mouth available for common use by the public.

COMMON TOWEL REGULATION.

. . . It shall be unlawful to provide a common towel:

(*a*) In a lavatory used in connection with any public institution, schoolhouse, hotel, restaurant, theater or public hall.

(*b*) In a lavatory used in connection with any railroad station, railroad car, steam or ferry boat.

The term "common towel," used in these regulations, shall be considered to mean a roller towel or a towel available for use by more than one person without being washed after such use.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Rheumatism.

Rheumatism as a cause of death is rather an unsatisfactory term, and no very definite conclusions regarding the frequency of the disease can be based upon mortality statistics alone, certainly not in a careful study of joint causes of death in which rheumatism is a contributory factor. The recorded mortality in the registration area in 1926 was 4,219 against 4,093 in 1925. Since 1923 the death rates per 100,000 of population have been as follows: 1923, 4.2; 1924, 4.6; 1925, 4.0; 1926, 4.0. The corresponding rates for England and Wales since 1916 have been as follows:*

1916	12.0	1922	11.2
1917	10.6	1923	10.6
1918	10.7	1924	10.7
1919	10.4	1925	11.4
1920	11.3	1926	11.2
1921	10.8	1927	11.5

* In 1927 the mortality from chronic and acute rheumatism in the United States registration area was 4,177 or at a rate of 3.9 per 100,000.

The male rate for England and Wales in 1927 was 8.7, and the female rate 13.4. No extended statistical study of the mortality from rheumatism has ever been made in this country, but of late years the disease, particularly in its relation to diseases of childhood, has attracted more attention. According to British investigations the amount of rheumatism rises steadily with increase in age, and it is said is three times as common at age twelve as at age five. This has reference only to rheumatism as a disease and not as a cause of death.

An important report on the subject has recently been published by the Medical Research Council on "Acute Rheumatism" with special reference to social conditions. In the words of the *London Times*, "Nothing could emphasize better the growing interest in the obscure problem presented by rheumatism — both acute and chronic — than the attention which is now being given to the subject." As yet the contributory causes which determine the incidence of the disease, particularly in childhood, are rather obscure. But in the opinion of the author of the report referred to as quoted in the *London Times*, "The idea seems to be justified that a high standard of food, clothing, housing, and general care does much to ward off

acute rheumatism, and that, as in the case of tuberculosis, social reform in the widest meaning of that term, is the most reliable of the methods of prevention which are now available."

An important contribution on "Studies in the Epidemiology of Rheumatic Fever" has been made by Dr. and Mrs. Segal, contributed to the Journal of the American Medical Association, July, 1927. It is studies of this kind that add materially to our understanding of a highly important but exceedingly complex situation. The investigation in question includes statistical returns from a large number of hospitals, but, unfortunately, not in all cases for as long a period of years as would be desirable. According to this investigation, the incidence of rheumatic fever has undergone profound modifications, particularly since 1918. Within recent years the rates of admission for different groups of hospitals arranged according to latitude have remained about the same. The present conceptions regarding mortality from rheumatic fever are summed up in a statement by Young that

> "Assuming that the mortality rate for rheumatic fever is an approximate index of rheumatic prevalence, Young finds that a suggestion that the local incidence of the disease has a slight but direct relation to the social status of the metropolitan areas and shows a general tendency to be more common in the areas where the conditions of life are least favorable. The mortality from heart disease at the ages in which the great majority of the cases are undoubtedly rheumatic in origin shows apparently a still closer relationship than the prevalence of rheumatism to those environmental circumstances implied by difference in general social status. There is a suggestion that the mortality from cardiac disease in females is more closely related to environmental conditions than in males; but whether this is real or not, and, if real, whether it is attributable to a more continuous and prolonged exposure of the female population to deleterious influences in unhealthy homes, is a question on which an opinion is a hazard."

Excellent recent observations on rheumatism as a disease are contained in the second volume of the Nature of Diseases by Dr. J. E. R. McDonagh, London, 1927.

Diabetes.

The mortality from diabetes, regardless of the insulin treatment, shows no material improvement. The annual number of deaths from this disease may be estimated at 20,000. In 1926 the number

of deaths from diabetes in the registration area was 18,881 against 17,385 in 1925. The death rate from this disease per 100,000 of population therefore increased from 16.9 in 1925 to 18.0 in 1926. In 1924 the rate was 16.6. Advance statistics for 35 large American cities for 1927 show a slight decline in the rate over the preceding year. In 1926 the rate for these cities was 21.3, while for 1927 it was 20.5. In 126 large and small cities the rate declined from 20.3 in 1926 to 19.4 in 1927. In 1927 the number of deaths from diabetes in the United States registration area was 8,937 or at a rate of 7.5 per 100,000.

The death rates vary widely according to localities and it may be assumed are due to local medical facilities, but such variations are probably not of much geographical significance. For large cities, a few representative rates have been as follows for 1927:

Baltimore	23.9	New Orleans	22.9
Boston	23.6	Greater New York	24.5
Chicago	22.5	Philadelphia	18.6
Detroit	17.5	Pittsburgh	18.2
Indianapolis	16.0	Portland, Oregon	18.8
Kansas City	15.7	Rochester, N. Y.	25.0
Los Angeles	13.3	St. Louis, Mo.	19.3
Minneapolis	23.5	St. Paul	18.4
Milwaukee	21.6	Seattle	15.2
Newark, N. J.	16.9	Washington, D. C.	19.8

In 1920 the crude death rate from diabetes was 20.6. Diabetes is relatively rare at ages under 45. According to sex, the rates for ages 35 and over have been as follows*:

	Males.	Females.		Males.	Females.
35–44	9.2	9.2	65–74	111.0	170.6
45–54	23.8	36.6	75 and over	149.2	156.3
55–64	63.1	99.1			

* Note particularly the excess in female mortality over age 45.

For all ages combined the male rate was 17.3 and the female rate 23.9. The white diabetes mortality rate in 1920 was 16.8 and the colored 7.9. The rate is higher in cities than in rural districts. For 1920 in the registration states the urban rate was 19.4 while the rural rate was 13.1. No very exhaustive statistical study of diabetes has been made in this country. For England and Wales, however, some very interesting statistics have been published for the year 1925 which are deserving of careful consideration. The diabetes death rates in England and Wales from 1916 to 1927 with the corresponding rates for the registration area of this country have been as follows:

MORTALITY FROM DIABETES, 1916–27.

United States Registration Area.		England and Wales.	
1916	17.1	1916	12.9
1917	17.0	1917	11.0
1818	15.9	1918	10.3
1919	14.9	1919	10.8
1920	16.1	1920	10.0
1921	16.8	1921	10.8
1922	18.4	1922	11.9
1923	17.9	1923	11.4
1924	16.6	1924	10.9
1925	16.9	1925	11.2
1926	18.0	1926	11.5
1927	17.5	1927	12.6

The male rate in 1926 was 20.6 and the female rate 12.4. These sexual differences, however, are not always maintained, for during some years the male rate was higher than the female rate.

The consolidated figures for 1921–25 give the following death rates according to sex at ages 15 and over, per 100,000 of population.

MORTALITY FROM DIABETES, ENGLAND AND WALES, 1921–25, PER 100,000.

	Males.	Females.		Males.	Females.
15–24	3.4	3.1	55–64	31.0	38.2
25–34	5.1	4.1	65–74	69.5	74.7
35–44	6.0	5.9	75 and over	87.8	73.8
45–54	11.7	12.2			

Compared with 1901–10 the rates show variations in reductions or increase, there having been a decline in the rate at most ages under 55 and an increase in the female rate at ages 65 and over, and an increase in the male rate at ages 75 and over. The analysis of this experience is too involved to admit of being dealt with in abbreviated form.

SMALLPOX IN OHIO.

In the eight years from 1912 through 1919, smallpox cases reported to Ohio health authorities numbered 33,401, a yearly average of 4,175. During the next nine years, 1920–28, smallpox reports numbered 33,874, a yearly average of 3,764. Total for the seventeen years was 67,275, with a yearly average of 3,975. It is evident, therefore, that with respect to smallpox, conditions in Ohio are not getting any better.

This conclusion is emphasized by figures thus far in 1929, with 524 reported cases to March 29 and a daily average of six, which is nearly twice the daily average for 1928, when 1,236 cases were reported.

There is no doubt that reported cases are far below the actual total. There is a tendency in many places to hide smallpox cases, and many of them are never seen by physicians; so it is a conserv-

ative estimate to say that in these seventeen years probably more than 100,000 Ohioans had smallpox.

Virtually all this vast aggregate of disease is due to activities of antivaccinationists of various kinds and degrees. They oppose every effort to provide the only known safeguard against smallpox; they prevent the adoption by boards of education of vaccination as a prerequisite to entry in the schools, and in other ways obstruct this phase of public health administration. Smallpox is the continuing disgrace of Ohio, and responsibility for it rests on the shoulders of antis and cultists whose activities constitute the reliable index of a low grade of community intelligence. (*Ohio Health News.*)

SUMMARY OF WORK, APRIL, 1929.

ADMINISTRATION DIVISION.

Prosecution ordered	2	Personnel:	
Legal notices	171	Provisional appointment	1
Settlements:		Temporary appointment	1
Total cases	160	Retirement	1
Notices	128	Culture station approved	1
Bills	32	Leave of absence	1
Lodging houses certified	5		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,173	Grease	49
Denatured alcohol	232	Dumps granted	2
Hen licenses	36	Dump revoked	1
Manicure-massage granted	57	Milk	2,378
Manicure-massage revoked	1	Pedlers	137
Manure	1	Garbage transportation	1
Ice cream manufacturers	4	Offensive trades	3
Ice cream dealers	786	Undertakers (annual)	168

MEDICAL DIVISION.

Reported cases	1,578	Visits:	
Nonresidents	88	By V. D. investigator	334
Deaths investigated	21	By medical inspectors to cases of communicable disease	439

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	1,083
Tuberculosis	427
Typhoid	44
Gonorrhea	935
Gonorrheal ophthalmia	61
Syphilis	1,210
Other examinations *	336
Bacteriological examinations of milk	753
Dark field	5
Genito urinary T. B.	26
Malaria	1
Swimming pools examined	64

* Urines, 283; feces for B. typhosus, 21; urine for B typhosus, 21; cultures for virulence, 2; blood culture for organisms, 1; paratyphoids, 2; canned corn for escherichia coli, 1; canned onions for B. Botulinus, 3; deviled meat for organisms, 1; blood smear for organisms, 1.

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores, during April, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Boston Medical Milk Commission, which may be sold either raw as certified milk, or pasteurized as certified milk — pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H	12.34	3.78	14,000
Antetomasso, Peter	12.81	4.19	22,000
Bancroft, Hugh	13.47	4.25	10,500
Brandley, F. J. & P. J	12.62	4.00	150
Buxton, William E	12.37	3.53	800
Casey, James	12.48	3.76	33,500
Cashin, James F., & Co	12.49	3.86	14,500
Cedar Hill Farm, Inc	12.14	3.60	13,000
Chapin, George L	12.68	3.95	17,500
Clark, Levi	12.27	3.70	15,500
Corkery, John J	12.65	4.05	9,200
Cosgrove, Martin S	13.05	4.13	17,500
Cummings, Francis S., Company	12.28	3.67	15,500
Daley, John	12.50	3.80	76,500
Dean, Louis W	13.40	4.30	14,500
Deerfoot Farms Company	12.67	3.95	16,000
Denehy, Timothy	12.26	3.50	26,000
Driscoll, William B., Company	12.36	3.78	18,000
Edgerly, Frank S	12.27	3.67	23,500
Elm Spring Farm Company	12.16	3.71	10,000
Ferguson, Malcolm D	12.34	3.70	35,000
Garfield, Mason	15.00	5.68	225
Garvin, Charles E	14.90	5.40	4,250
Giroux, J. E. & H. J	12.19	3.60	19,500
Griffin, Joseph L	12.71	3.88	14,000

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, Chester W.	12.64	3.80	15,000
Hampden Creamery Company	13.16	4.19	15,500
Herlihy Brothers, Inc.	12.21	3.66	59,000
Hickey, James B.	12.05	3.63	15,000
Holden, John E.	12.58	3.89	14,500
Hood, H. P., & Sons, Inc.	12.18	3.82	18,500
Hutchinson, Frank T.	12.01	3.50	32,000
Jones, William T., Company	12.55	3.88	25,500
Kendall Brothers	12.37	3.72	61,500
Kingston, Samuel	12.51	3.67	10,500
Knapp, George J.	12.30	3.81	14,000
Lang Brothers	11.85	3.66	30,000
Larsson, Charles	13.14	4.83	81,000
Lyndonville Creamery Association	12.64	3.89	25,000
Manning, Harriet	12.18	3.42	17,000
McAdams, J. F., & Brothers, Inc.	12.38	3.66	12,000
McKernan, James	12.31	3.88	13,500
Munchback, Albert W.	12.40	3.65	9,000
New England Creamery Products Company	12.50	3.83	16,500
Robinson, A. J.	12.56	4.10	18,500
Schuster, Adam	12.33	3.83	16,500
Seven Oaks Dairy Company	12.46	3.76	7,000
Shick, Jacob	12.50	3.70	10,500
Somerset Farms Creamery Company	12.84	3.95	6,400
Sterling Farms Milk Company	12.28	3.61	14,500
Stone, H. L.	12.27	3.72	21,000
Stuart, W. E., Company	12.52	3.90	16,000
Turner Centre System	12.44	3.78	23,500
United Farmers Co-operative Creamery Company	12.64	3.98	15,500
Vartanian, K.	12.46	3.83	175,000
Vartanian, S.	12.30	3.75	11,500
Walker-Gordon Laboratory Company	12.64	3.95	85
Weiler, E., & Sons	12.36	3.85	18,000
Westwood Farms Milk Company	12.27	3.71	2,900
White Brothers	12.67	3.88	15,000
Whiting Milk Companies	12.34	3.74	12,500
Whittemore, W. D.	12.69	3.88	14,500
Williams, Edward C.	12.82	4.16	5,000
Wiswall, Granville A.	12.84	4.25	47,000
Woodland, Charles L.	12.29	3.78	13,000

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids.	Fat.	Bacteria in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.53	3.97	12,000
Brown, M., & Sons.....	Whiting Milk Companies...	12.38	3.75	20,500
Cloverdale, The, Company.....	Turner Centre System.....	12.45	3.80	26,000
Economy Grocery Stores Company.	Whiting Milk Companies...	12.26	3.70	9,100
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	12.88	3.99	23,000
Morgan Brothers Company....	New England Creamery Products Company.	12.61	3.95	29,500
Winer, M., Company.....	M. Winer Company.....	12.73	3.90	13,000

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Antetomasso, Peter.....	12.86	4.20	11,000
Cosgrove, Martin S.....	13.50	4.60	51,500
Cummings, Francis S., Company.....	12.93	4.24	5,600
Dean, Louis W.....	13.66	4.30	5,000
Elm Spring Farm Company.....	12.65	4.17	7,000
Griffin, Joseph L.....	13.28	4.20	8,000
Herlihy Brothers, Inc.....	12.21	4.03	10,500
Hood, H. P., & Sons, Inc.....	12.53	4.13	5,000
Jones, W. T., Company.....	13.24	4.28	11,000
McAdams, J. F., & Brothers, Inc.....	12.72	4.25	9,500
New England Creamery Products Company.....	13.01	4.10	14,000
Robinson, A. J.....	13.34	4.30	15,000
Seven Oaks Dairy Company.....	12.72	4.00	6,100
Sterling Farms Milk Company.....	12.89	4.20	12,500
Turner Centre System.....	13.46	4.50	12,500
Weiler, E., & Sons.....	12.84	4.23	12,500
White Brothers.....	12.88	4.50	9,000
Whiting Milk Companies.....	12.56	4.04	12,000
Woodland, Charles L.....	12.54	4.00	7,000

CERTIFIED MILK.

Raw milk, produced, bottled and sealed at the farm under the supervision of the Boston Medical Milk Commission. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
		Per Cent.	Per Cent.	
Cedar Hill Farm, Inc.	Own	12.62	3.95	2,500
Cummings, Francis S., Company,	Alta Crest	11.84	3.45	1,200
Hood, H. P., & Sons, Inc.	Own	12.87	4.03	2,400
New England Creamery Products Company.	Bellows Stock Farm	13.14	4.20	2,800
Turner Centre System	Alta Crest	12.27	3.63	4,000
Walker-Gordon Laboratory Company.	Own	12.89	4.00	2,700
Whiting Milk Companies	Hampshire Hills	13.42	4.65	2,400

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Boston Medical Milk Commission.

Name of Dealer.	Kind of Certified Milk.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
		Per Cent.	Per Cent.	
Cedar Hill Farm, Inc.	Own	11.88	3.45	500
Hood, H. P., & Sons, Inc.	Own	13.00	3.95	190

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:	
Milk from wagons	488
Milk from stores	889
Milk brought by citizens	21
Vinegar	73
Ice cream	5
Water	1
Fish	2
Dye	2
Cherries, bottled	1
Miscellaneous examinations	24
Samples referred to Bacteriological Laboratory for examination	753
Court cases	8
Fines	$125

SUMMER CAMP REGULATIONS.

The regular meeting of the Massachusetts Association of Boards of Health concerned itself with a discussion of tentative regulations affecting summer camps. These proposed regulations have the indorsement of the State Health Department, the New England Camp Directors Association, and the Massachusetts Association of Boards of Health. Dr. Clarence C. Scamman, Deputy State Health Commissioner, stressed the importance of standard uniform regulations that the managers of summer camps might well follow. The State Department recently asked for a camp licensing law, which failed of passage, and the minimum standards now offered to local health officers and camp authorities have been drafted with great care. Prof. Gordon M. Fair of Harvard University spoke on the necessary sanitary requirements, and Dr. Francis George Curtis emphasized the necessity of the medical inspection recommendations.

The regulations were approved by the association, with some minor amendments, and it is expected that they are now ready for distribution by the State Department of Public Health.

DAIRY DIVISION.

Total services	2,008	Total cattle inspected	5,874
Dairies inspected	428	Inspections of milk plants and licensed dealers	221
Scoring above 50 *	369	Bacteriological examinations	726
Scoring below	59	Country creamery inspections	16
With milk rooms	375	Sediment tests	582
Without milk rooms	53		
Inactive	33		

* Passable mark.

FOOD INSPECTION DIVISION.

APRIL, 1929.

District inspections	3,176
Reinspections	467
Market inspections	1,058
Terminal inspections	171
Vehicle inspections	4,639
Stand inspections	1,522
Complaints	26
Notices to abate	221

Condemnations:

Meat	193 pounds	Groceries	4,812 pounds
Fish	322 pounds	Nuts	67 pounds
Fruit	416 pounds	Confectionery	621 pounds
Vegetables	80,661 pounds	Dairy products	281 pounds

ABATTOIR DIVISION.

Cattle inspected	3,135	Parts condemned (lbs.)	30,856
Calves inspected	10,742	Animals condemned	237
Swine inspected	4,298		

SANITARY DIVISION.

Original inspections	2,702	Complaints investigated	65
Reinspections	7,420	Nuisances abated	1,940
Legal notices served	159		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	18	236	188	424	42	33	75
East Boston	14	78	114	192	15	18	33
North End	13	54	132	186	21	27	48
West End	12	55	45	100	9	5	14
South Boston	12	104	90	194	22	26	48
Boston Dispensary	9	27	15	42	9	—	9
Brighton	10	27	15	42	6	5	11
Charlestown	8	28	27	55	6	6	12
Codman square	13	90	99	189	14	23	37
Hyde Park	8	42	45	87	8	11	19
Totals	117	741	770	1,511	152	154	306

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	57	30	224	208
East Boston	19	9	30	49
North End	42	7	63	79
West End	7	7	—	—
South Boston	36	9	95	69
Boston Dispensary	4	3	—	—
Brighton	6	—	—	—*
Charlestown	8	2	—	—*
Codman square	35	7	—	—*
Hyde Park	14	5	—	—*
Totals	228	79	412	405

* No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING APRIL, 1929.

Classification.	Number.	Percentage.
After death	12	21.82
Seven days or less	4	7.27
Eight to fourteen days, inclusive	3	5.45
Fifteen to twenty-one days, inclusive	2	3.64
Twenty-two to thirty-one days, inclusive	3	5.45
Within First Month. (Total)	24	43.63
Within second month	2	3.64
Within third month	2	3.64
Within fourth month	2	3.64
Within fifth month	1	1.82
Within sixth month	1	1.82
Within seventh month	—	—
Within eighth month	1	1.82
Within ninth month	2	3.64
Within tenth month	1	1.82
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	36	65.47
Within second year	10	18.18
Within third year	1	1.82
More than three years	8	14.54
Grand totals	55	100.01

ACHIEVEMENT.

The world acclaims the creative genius of all those who serve humanity by their great achievements in this age of material things.

There is an essential simplicity about all great achievements. So much so that because of its very simplicity, full recognition of its value is unfortunately sometimes lacking.

And so it is with the simple and marvelous accomplishment of being a mother to a child.

The greatest of all spiritual and material achievements is Motherhood, because it creates and builds life itself. It fosters genius and offers the greatest opportunity to serve mankind.

— *Walter A. Strong.*

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, April, 1929.

Inspections made	541
Physical examinations	175
Toxin-antitoxin administrations	243
Vaccinations	655
Vaccination certificates issued	202
Day nursery visits	45
Parochial school visits	35
Schick tests in parochial schools	1,097
Schick readings in parochial schools	936

NUMBER OF CONFERENCES AND ATTENDANCE.

Station.	Number of Babies.	Number of Preschool (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	179	15	194	22	4	26	4	49
31 Lincoln street, Brighton	81	6	87	5	1	6	4	22
Charlestown Municipal Building	254	15	269	34	2	36	9	30
Codman Square Library	255	65	320	55	5	60	9	36
Columbia Road Municipal Building	354	16	370	56	1	57	9	41
1 Arcadia street, Dorchester	293	42	335	51	3	54	9	37
East Boston Health Unit	315	39	354	76	4	80	9	39
Hyde Park Municipal Building	221	29	250	27	5	32	9	28
Curtis Hall, Jamaica Plain	163	19	182	27	1	28	4	46
41 North Margin street	218	74	292	37	8	45	9	32
Roslindale Municipal Building	272	52	324	33	8	41	5	65
Children's Hospital	192	20	212	24	4	28	5	42
1049 Columbus avenue	407	45	452	67	26	93	9	50
Vine Street Municipal Building	404	37	441	70	9	79	9	49
133 Dorchester street, South Boston	396	59	455	74	15	89	8	57
122 Tyler street	119	21	140	13	5	18	4	37
Shawmut Avenue Municipal Building	118	39	157	19	2	21	4	39
57 East Concord street	127	7	134	26	—	26	4	34
17 Blossom street	304	41	345	42	2	44	9	38
Totals	4,672	641	5,313	758	105	863	132	41

TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS.

Station.	Toxin-Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	4	—	—	4	5
31 Lincoln street, Brighton	1	1	2	4	9
Charlestown Municipal Building	—	—	—	—	102
Codman Square Library	6	18	20	44	65
Columbia Road Municipal Building	2	—	—	2	93
1 Arcadia street, Dorchester	22	24	15	61	69
East Boston Health Unit	—	—	—	—	—
Hyde Park Municipal Building	—	2	2	4	16
Curtis Hall, Jamaica Plain	1	1	—	2	5
41 North Margin street	—	—	—	—	49
Roslindale Municipal Building	4	4	3	11	42
Children's Hospital	7	15	18	40	30
1049 Columbus avenue	2	2	—	4	108
Vine Street Municipal Building	4	3	—	7	55
133 Dorchester street, South Boston	—	—	—	—	66
122 Tyler street	7	1	1	9	11
Shawmut Avenue Municipal Building	3	1	3	7	14
57 East Concord street	—	1	—	1	4
17 Blossom street	1	1	1	3	4
Totals	64	74	65	203	746

DENTAL ACTIVITIES AT HEALTH UNITS.

APRIL, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	657	582	813	565	636	3,253
Number of treatments by dentists	1,243	862	1,122	115	927	5,309
Number of treatments by hygienist	129	111	151	218	196	663

Cases referred by parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

APRIL, 1929.

BOSTON DISPENSARY:
- Calls by district physician 297

BOSTON LYING-IN HOSPITAL:
- Number prenatal clinics 22
- Total attendance 265
- New cases 76

COMMUNITY HEALTH ASSOCIATION:
- Homes visited 11,522
- Cases referred 562
- Diseases reported 7
- Number of meetings of mothers' club 17
- Attendance 178

STATE DEPARTMENT OF MENTAL DISEASE:
- Number of clinics 2
- Attendance 11
- Number of new cases 1

CHILDREN'S HOSPITAL:
- Number of clinics 7
- Attendance 57

BOSTON HEALTH DEPARTMENT:

Refraction Service:
- Number of refractions 101
- Glasses prescribed 42
- New cases 28

Nose and Throat Service:
- Number of clinics 2
- Attendance 145

Number of meetings of mothers' club 2
- Attendance 37

NURSING SERVICE.

Homes Visited		15,344
Child Hygiene:		
Visits to new cases	1,429	
Visits to old cases	9,113	
Total		*10,542
Communicable Diseases:		
Visits to new cases	944	
Visits to old cases	2,196	
Total		†3,140
Tuberculosis:		
Visits to new cases	238	
Visits to old cases	4,145	
Total		‡4,383
Miscellaneous:		
Infant death investigations	62	
Maternal death investigations	8	
Patients accompanied to hospital	32	
Visits to day nurseries	79	
Visits to parochial schools	413	
Special visits	9	
Total		603
Total number of visits		18,668

	Hrs.	Min.
Hours at station by nurses	3,986	15
Hours at baby and P. S. Conferences	1,951	55
Hours at tuberculosis clinics	893	10
Total number of hours	6,831	20

* Includes 91 wrong addresses; 1,000 not seen; 1,091 absent visits.

† Includes 31 wrong addresses; 185 not seen; 46 absent visits; 149 ophthalmia visits.

‡ Includes 39 wrong addresses, 459 not seen; 498 absent visits; 1,954 positive; 1,110 contacts; 821 suspects.

DIPHTHERIA PREVENTION.

Are you protecting your child against diphtheria, a disease that often results fatally, bringing with it suffering, sorrow and expense. Why not consult your family physician *now* instead of delaying by postponing? The Health Department maintains baby clinics and Health Units in all sections of the city and the nurses and doctors on duty are available for this work. Toxin-antitoxin is the preventive for diphtheria; take advantage of its efficacy before it is too late.

VITAL STATISTICS, APRIL, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING APRIL, 1929, WITH COMPARATIVE FIGURES FOR APRIL, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	**958**	1,113	—155	**14.27**	16.71	—2.44
Nonresidents deducted	**763**	900	—137	**11.37**	13.51	—2.14
By Age:						
Under one year	**109**	178	—69	**1.62**	2.67	—1.05
One year to four years, inclusive	**39**	65	—26	**.58**	.97	—.39
Sixty years and over	**411**	455	—44	**6.12**	6.83	—.71
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**42**	57	—15	**.62**	.85	—.23
Arteriosclerosis	**37**	25	+12	**.55**	.37	+.18
Heart disease	**201**	238	—37	**3.00**	3.57	—.57
Nephritis, chronic	**66**	53	+.13	**.98**	.79	+.19
Infant and Maternal Mortality:						
a. Total registered live births *	**1,176**	1,212	—36	**17.52**	18.20	—.68
b. Registered stillbirths	**25**	39	—14	**.37**	.58	—.21
Stillbirths per 1,000 births and stillbirths †	—	—	—	**20.81**	31.17	—10.36
c. Deaths of mothers from causes incident to childbirth	**11**	5	+6	**.16**	.07	+.09
Deaths of mothers per 1,000 births and stillbirths †	—	—	—	**9.16**	4.00	+5.16
Deaths of children in first year of life	**109**	178	—69	**1.62**	2.67	—1.05
Deaths in first year per 1,000 live births†,	—	—	—	**92.69**	146.86	—54.17
Violence:						
Accidents	**44**	48	—4	**.65**	.72	—.07
Homicides	**6**	3	+3	**.09**	.04	+.05
Suicides	**13**	15	—2	**.19**	.22	—.03
Miscellaneous:						
Alcoholism, acute or chronic	**10**	16	—6	**.15**	.24	—.09
Bronchopneumonia	**68**	112	—44	**1.01**	1.68	—.67
Cancer	**97**	87	+10	**1.44**	1.31	+.13
Cirrhosis of the liver	**7**	6	+1	**.10**	.09	+.01
Diabetes mellitus	**14**	24	—10	**.21**	.36	—.15
Diarrheal diseases, children under two years of age	**9**	21	—12	**.13**	.31	—.18

* Subject to increase. † Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	1	—	+1	.015	—	+.015
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	6	—	+6	.09	—	+.09
Deaths.	4	—	+4	.06	—	+.06
Diphtheria.....Cases..	116	108	+8	1.73	1.62	+.11
Deaths.	4	10	—6	.06	.15	—.09
Influenza.....Cases..	24	18	+6	.36	.27	+.09
Deaths.	2	5	—3	.03	.07	—.04
Measles.....Cases..	85	1,214	—1,129	1.27	18.23	—16.96
Deaths.	—	18	—18	—	.27	—.27
Pneumonia (lobar).....Cases..	138	220	—82	2.06	3.30	—1.24
Deaths.	43	73	—30	.64	1.10	—.46
Scarlet fever.....Cases..	301	271	+30	4.48	4.07	+.41
Deaths.	5	3	+2	.07	.04	+.03
Tuberculosis (pulmonary).....Cases..	121	153	—32	1.80	2.30	—.50
Deaths.	55	53	+2	.82	.79	+.03
Tuberculosis (other forms).....Cases..	30	43	—13	.45	.64	—.19
Deaths.	4	4	—	.06	.06	—
Typhoid fever.....Cases..	8	2	+6	.12	.03	+.09
Deaths.	—	1	—1	—	.015	—.015
Whooping cough.....Cases..	168	192	—24	2.50	2.88	—.38
Deaths.	1	7	—6	.015	.10	—.085

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

J. E. Purdy & Co., Boston.

A BABY IN THE HOUSE.

Something to talk about, something to do,
  Something to laugh at the whole day through,
Something to look at with pride and with glee,
  Something for friends to come in just to see;
Oh, you can't sum up all the wonderful things
  Of joy and delight which a new baby brings.

There's a smile that is brighter than sunbeams of May,
  A wave of farewell as you're starting away,
A glad time of frolic which no one can steal,
  A thrill inexpressible, lovely to feel.
There's something to boast of and something to tell
  When a baby has come to the place where you dwell.

There's never an hour that is lonely and drear;
  The days are filled up to the top with good cheer.
You have something to play with and someone to sing to,
  Someone to romp with and someone to cling to;
And always you're finding some pleasure that's new
  When God has sent down a glad baby to you.

— *Edgar A. Guest.*

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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MENTAL STATES AND NUTRITION.

Among the interesting papers presented at the annual meeting of the Massachusetts Medical Society at Worcester, in June, 1928, was one by Dr. W. B. Cannon, who described experimental evidence of functional nutritive derangement from emotional states and the nervous mechanism by which such results are produced.

In the April 13, 1929, number of the "Journal of the American Medical Association," Dr. W. C. Alvarez presents an instructive summary of the work done by himself, Cannon and others in this field.

However great the nutritive possibilities of a food and whatever its calories or vitamin contents, its nutritive value becomes very uncertain if it be dumped into a functionally deranged digestive apparatus, whatever the cause.

In Manzoni's "I Promessi Sposi" the author expressively describes what would practically happen under such circumstances when he says that the food which his hungry hero, 'Renzo, had just eaten with relish *was changed into so much poison*, upon his overhearing his name mentioned by the occupants of an adjoining restaurant table as that of a person who had led a serious riot in Milan the day before and for whom the military and police of the country were hunting.

Doctor Alvarez, in the introduction of his article, observes, "Here we are, day after day, and often several times a day, diagnosing 'nervous indigestion' and yet what do most of us really know about the ways in which a tired brain can produce distress in the abdomen? We might turn for help to the physiologists, but soon we would learn their limitations."

The sight, smell, or even the pleasurable thought of food normally produces a functional activity of the whole digestive tract. A similar preparation for the reception of food may also take place at the approach of regular meal time. If eating be delayed, there may be spasmodic motion of the digestive apparatus, pain and hunger. Deviation from regular hours for meals on Sundays may be accountable for digestive discomforts Monday and Tuesday and possibly longer.

Digestion and consequently nutrition is more than a vegetative process. There are centers in the nervous system which have the power to control the regular functioning of the digestive apparatus. The digestive apparatus may be started in operation by the reflex action produced in these centers by the introduction of food in the mouth. The control of these centers over the operation of the digestive apparatus apparently may be influenced, favorably, or unfavorably, by the direct action on these centers of nervous stimuli originating in other parts of the brain, the parts which have to do with thoughts, reasoning and emotions.

The taste, the sight or smell, or even the thought of food may be sufficient actually to start a flow of the digestive secretions and the rhythmic contractions of the alimentary canal. Such emotional stimuli doubtless also affect digestion, and so also metabolism and nutrition indirectly through their influence in promoting or retarding internal secretions like those from the thyroid and suprarenal glands. Doctor Alvarez suggests that the troublesome spasm or arrestation of peristalsis in the intestinal canal which so often follows surgical operations might sometimes perhaps be relieved by the sight and smell and the taking into the stomach of small amounts of appetizing food, attractively prepared and offered in a way to promote a favorable psychic impression. In such cases, a "*reverse peristalsis*" rather than the relaxation of a spastic intestine would, however, be produced by offering the patient hospital soup or crackers or milk suggestive of the smell of carbolic acid or ether. A nationally known physician cannot eat a cup custard in his own home, no matter how attractively prepared, because it has become associated in his mind with the food trays of hospital patients desperately ill.

Both among human beings and animals there is to be observed, among different individuals, a wide difference in the effect of emotions

or other psychic impressions upon the digestive secretions and digestive process. Some human beings as well as some animals are so happily constituted that no sort of provocation will evoke an emotional response sufficient to cause a serious interference with digestion. Such individuals are however exceptional and as a rule, pain, anger or fright may be expected to be followed by a checking of secretions necessary for the conversion of food into nutritive products and by an arrestation of the peristaltic movement of the digestive apparatus.

Physical fatigue, as well as fear, anger or grief, will derange the digestive process. In such instances it is conceivable that the accumulation of *fatigue poisons* and their toxic effect on nerve cells may serve to disturb the individual's nervous or psychic stability.

After referring to some experimental evidence that physical fatigue may stop the secretion of the gastric juice, Doctor Alvarez expresses himself as follows:

"I have noticed that the man who comes into camp hungry from an exhausting climb and immediately sits down to a hearty meal, will occasionally suffer afterward for several days with abdominal pain, flatulence or diarrhea. I have seen similar failures of digestion with resultant diarrhea when food was eaten under psychic strain, as at banquets, at political meetings or in homes overshadowed by illness and death, and I suspect that many upsets now ascribed to the eating of some unknown spoiled food are really due to this drying up of secretions which accompanies excitement and fatigue."

"One ought at least to be as careful of one's self as an experienced horseman is of his steed when he brings him home from a long journey. He would never think of watering or feeding it immediately, but always ties it up for an hour or two, so that when it feeds it will not be seized by an attack of colic. I strongly suspect that a number of intestinal upsets and diarrheas commonly experienced by persons who are traveling and usually ascribed by them to the eating of some spoiled food, are due purely to the fact that a large meal was taken into a digestive tract that was too tired to deal with it."

Digestion, and even the preparation for digestion, and the manufacture and pouring out of the digestive secretion are associated with an increased flow of blood to the digestive tract. The physical presence of an increased blood supply in the digestive apparatus, as well as the nervous mechanism which determines the flow of blood, are factors which influence digestion and nutrition

and, as Doctor Alvarez observes, "just as sensitive persons blanch and blush externally, so they may perhaps blanch and blush internally."

For those to whom the foregoing may furnish evidence that the malfunctioning of their digestive apparatuses may be due to unfavorable psychic influences or the putting of food into a stomach tired or otherwise unprepared to receive it, Doctor Alvarez suggests certain advice which is in substance as follows: Increase your rest and sleep, rest before eating, and cultivate a better technique at meal times. He assumes that there may be a problem how to avoid strife, worry and care, and he adds that for many their avoidance is practically impossible. "Doubtless all that can be done at times is to postpone a meal until strong emotion has passed, calm has been restored, fatigue has been lessened, and hunger has returned." In other words, we should accept Macbeth's advice and let "good digestion wait on appetite and health on both."

This subject is not to be dismissed, however, without reminding those who suffer from supposed "nervous indigestion" or abdominal pain, or distress, possibly attributable to pyschic influences, that the same symptoms may be produced by a definite physical cause within the abdomen itself. Deformity or disease within the abdomen may be directly accountable for symptoms. Physical deformity, or disease, also operates indirectly to lower the general health and disturb the person's nervous and psychic stability and thus directly produce digestive disturbances of a nervous origin. Persistent or frequently recurring abdominal pain, or intestinal malfunctioning, or distress, always calls for a careful search for a physical cause and it is only after this has been done that "nervous instability" or exhaustion or psychic influences can be regarded as solely responsible for the trouble. Pain in the pit of the stomach may follow a quarrel just before eating or at meal times, but the same sort of a pain comes with recurrent attacks of appendicitis. Abdominal pain is also a symptom of a serious development in the course of degenerative changes in the muscles of the heart.

AN ANALYSIS OF CERTAIN CAUSES OF INFANT DEATHS IN BOSTON AND OF CERTAIN INFANT DEATHS IN BOSTON'S HOSPITALS DURING THE CALENDAR YEAR 1928.

What is the irreducible minimum in the infant mortality rate, and what causes of death are the most difficult to influence favorably by a public health program?

The answer is, of course, a difficult one and it is impossible

to use definite, all-inclusive statements in answering these questions. Some light, is shed, however, on early infant mortality by studying a group of infant deaths which annually continues to take a large toll and which appears to be the group in which is indicated the next logical point of attack in an infant mortality reduction program.

The group in question includes premature birth, congenital malformations and injuries at birth. In Boston the deaths from these causes alone constituted 42.7 per cent of the total infant deaths for the year 1928, both for infants dying at home and in hospitals. For purpose of analysis we shall treat the total deaths from these causes in age groups from birth to one month and shall make special reference to deaths of infants in hospitals where conditions for treatment are admittedly better than those obtaining at home.

There were 1,446 infant deaths in Boston during the calendar year 1928. Of this number 974, or 67.3 per cent, died in hospitals.

The total number of infant deaths under one day was 264 and of these 169, or 64 per cent, died in hospitals. Of the 169 hospitalized deaths the largest number was due to premature birth, which caused 124 deaths. Injuries at birth were responsible for 28 deaths, and congenital malformations for 9. The total deaths under one day which were hospitalized amounted to 11.7 per cent of the total infant deaths, all causes.

The total number of infant deaths age one day, but less than two days, was 82 and of these 64, or 78.1 per cent, died in hospitals. Of the 64 hospital deaths 26 were due to prematurity; 16 to injuries at birth and 9 to congenital malformations. The total deaths age one day and less than two days which were hospitalized amounted to 4.4 per cent of the total infant deaths, all causes.

The total number of infant deaths two days old, but less than three days, was 64 and of these 44, or 68.7 per cent, died in hospitals. Of these 44 deaths in hospitals 17 were due to premature birth, 9 to injuries at birth and 8 to congenital malformations. The total deaths age two days and less than three days which were hospitalized amounted to 3.04 per cent of the total infant deaths, all causes.

The total number of infant deaths three days and under one week was 103 and of these 72, or 69.9 per cent, died in hospitals. Of the 72 hospital deaths 23 were due to premature birth, 17 to injuries at birth and 15 to congenital malformations. The total deaths age three days and under one week which were hospitalized amounted to 5 per cent of the total infant deaths, all causes.

The total number of infant deaths age one week and under one month was 164 and of these 119, or 72.5 per cent, died in hospitals.

Of these 119 deaths, 33 were due to premature birth; 21 were due to congenital malformations and 11 were due to injuries at birth. The total deaths age one week and under one month which were hospitalized amounted to 8.2 per cent of the total infant deaths, all causes.

To recapitulate: Of the total deaths in hospitals (468) of the infants who lived less than one month 223 were due to prematurity; 81 were due to injuries at birth and 62 to congenital malformations. Here then is a total of 366 deaths in this special group in hospitals of babies who did not attain an age of one month, from causes of death which are ordinarily beyond the scope of public health work even though much has been done and is being done to instruct mothers in prenatal care. Of these 366 deaths, the total under one day, from this group of causes, 161, represents children born under the most favorable conditions, that is, in hospitals. The question arises: What methods for the reduction of this total, in addition to those already employed, can be adopted to reduce the mortality in this group?

While we may not understand all the biological factors involved in the fetal evolution of a malformed child we have no reason to believe that a tendency to such faulty development may not be lessened by the generally accepted precepts with respect to prenatal care. Statistical evidence also points unmistakably to the fact that infant mortality at or near birth may be reduced by a higher average of obstetrical skill and care. This calls for improved standards of obstetrical service both on the part of private physicians and institutions, and a more rigid supervision of the business of midwifery.

The economic condition of the family is, of course, a factor which can never be disregarded, but it is more important today that the family, especially the mother, be educated to appreciate the proper standards of prenatal and obstetrical care and that she be disposed to make use of the facilities which are available in her community to help her with her problems of maternity.

Of the total number of infant deaths 362 were nonresidents and of these 356, or 98.3 per cent, died in hospitals.

Analysis by Wards.

Ward 21, in Allston, had the largest percentage of hospitalized infant deaths all causes, 88.5 per cent, and Ward 14, in Dorchester (Mt. Bowdoin and Franklin Field section), was next, with a percentage of 75.6. Ward 9 (Roxbury), the ward which had the second highest infant mortality rate for the year, was third on the list of hospitalized infant deaths, with a percentage of 74.6.

The wards having a low percentage of infant deaths in hospitals were Ward 7 (South Boston), the lowest, with a percentage of 35.7 per cent; Ward 18 (Hyde Park) was the lowest but one, with a percentage of 42.2 per cent, and Ward 6 (South Boston) was third in the low group, with a percentage 44.4 per cent of hospitalized infant deaths.

Wards 1 and 3 were also low in the hospitalization percentage column, having 44.6 per cent and 46.8 per cent, respectively. These wards, especially Ward 1 (East Boston), are removed from the hospitals catering to maternity cases and, in addition, each has a large percentage of foreign-born mothers; such mothers have a tendency toward caring for sick infants at home and send a baby to the hospital many times only as a last resort, and then in many instances only when the child is moribund.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Leprosy.

Leprosy lingers and will continue to linger as one of the most important public health problems of the country. For although the number of lepers is small, the seriousness of the disease demands the full use of all available resources for its segregation, control and possible cure. In the table following, I give the number of deaths from leprosy during the period 1916–27. It will be observed that during the first five years there were 95 deaths in the United States registration area against 107 deaths in the next five years. The death rate, however, is but a minor indication of the real extent of this affliction.

LEPROSY IN THE UNITED STATES REGISTRATION AREA, 1916–27.

Year.	Deaths.	Year.	Deaths.
1916	11	1922	15
1917	17	1923	29
1918	24	1924	15
1919	19	1925	30
1920	24	1926	24
1921	18	1927	2.9

The foregoing tabulation may be compared with a corresponding statement for England and Wales. In that country, during the five years ending with 1921, there were 12 deaths from leprosy against 6

during the five years following. But leprosy in England is a very different problem from leprosy in this country. We not only have certain centers of endemic foci of infection, but we suffer seriously from imported cases from the West Indies, the Far East and also the Near East among our immigrant population.

MORTALITY FROM LEPROSY, ENGLAND AND WALES, 1917–27.

Year.	Deaths.	Year.	Deaths.
1917	—	1923	2
1918	5	1924	2
1919	3	1925	2
1920	3	1926	—
1921	1	1927	2
1922	—		

While leprosy is a rare affection, prompt diagnosis is of the very first importance. Practically all the cases which are discovered in this country are promptly transferred to the Federal Leprosarium at Carville, La. This settlement is unquestionably the outstanding institution of its kind in the world at the present time. The hospital is now under the direction of the United States Public Health Service and in charge of Dr. O. E. Denney, a surgeon of extended experience. The institution at the present time has not far from 300 inmates suffering from all the complicated stages of the disease. Of the 257 cases at the institution on June 30, 1927, 90 had been born in Louisiana, 17 in Florida, 17 in Texas, 9 in California, 3 in Georgia, 4 in Mississippi, 3 in New York, while a number of individual cases were distributed over different states. Aside from those of native birth, there were 18 who had been born in China, 12 in Mexico, 5 in the Philippine Islands, 7 in Hawaii, 2 in Porto Rico and 1 in Panama. Of other foreign countries, the outstanding ones were Greece, represented by 12 patients; Spain with 5; and Palestine with 3. There were 4 from the West Indies generally, 1 from the Bahamas, 1 from the Virgin Islands, and 2 from Bermuda. There were 2 patients from India, 7 from Italy, 2 from Russia, 1 from Sweden, and 1 from Finland. Thus, the leprosy problem in the United States is essentially an international one depending largely on its foreign immigration. Aside from the endemic centers in Louisiana, where the disease has prevailed for more than a hundred years, chiefly in the extreme southern parishes bordering on the Gulf.

In the experience of the Louisiana institution during the fiscal year 1927 there were 17 deaths of lepers, or at a rate of 60 per 1,000. The causes of death were leprosy in 2 cases, pneumonia in 7, pulmonary tuberculosis in 1, nephritis in 3, enterocolitis in 1, cardiac asthma in 1, and arteriosclerosis in 2. Of the 56 native-born lepers

admitted during the year, 24 were admitted from Louisiana, 6 from California, 9 from Texas and 4 from New York. One each was admitted from the District of Columbia, Illinois, Montana, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Tennessee and Washington. Three were admitted from Florida. Doctor Denney, in his report, draws attention to the treatment of 255 patients in the hospital, of whom 154 were taking crude chaulmoogra oil by mouth, the dosage ranging from 3 drops to 400 drops daily, according to the tolerance of the individual. Twenty-eight patients had been placed on intramuscular injections of crude chaulmoogra oil, the oil, with an analgesic, being administered twice weekly in doses ranging from 3 to 8 c.c.

At a meeting of the Royal Society of Medicine in 1927, Sir Leonard Rogers, one of the foremost authorities on leprosy, presented a report contributed by Dr. H. W. Wade and Dr. C. B. Lara, from which I give the following extract.

"They said that the antileprosy campaign in the Philippines at the present time was a three-phase one in which both treatment and segregation played leading roles. The chief medicament employed by them was chaulmoogra ethyl esters, usually with iodine added to reduce irritation. Weekly intramuscular injections were used almost invariably. At the San Lazaro Hospital, in the five years 1921–25, a total of 250 bacteriologically positive cases had become negative. This was largely a collecting station and could not accommodate all the patients who were eligible to stay. In the Cebu detention camp (where treatment was even less than at San Lazaro) there was a large turnover of cases. At the Culion colony new work was started in 1921 with 500 cases, and by early in the following year 1,000 cases were under treatment — almost exclusively by ethyl esters — while by the end of that year the cases that had been for a time under treatment totaled 4,458, the average duration of the disease in these being about eight years. Up to November 1 last 358 patients had been discharged or paroled, 27 had died while in the negative period, and on that date 244 negatives were under observation. Of the 358 cases that had now been sent out only four had returned to Culion, and three out out of 245 paroled. For work on a large scale the modern treatment was decidedly superior to the older, especially in early cases."

The full report of Doctors Wade and Lara was published in the "Lancet" of March 19, 1927. I quote from this paper the following concluding observations:

"The present view is that for large-scale work the modern treatment methods are decidedly superior to the older ones, and that they seem to be particularly effective in early cases. Though

they are admittedly much less effective in well-established advanced cases, the results obtained in the Philippine Islands during the last few years show that a not inconsiderable proportion of such cases (probably 15 to 20 per cent) can be 'apparently cured' if treated intensively under proper conditions. This is a noteworthy advance, however discouraging to any one treating any particular small group of unselected cases. In view of the impressive total, which all 1926 releases will bring to 800 or more, one cannot, we submit, deny the relative effectiveness of present treatment, or its absolute value in properly selected cases. It were quite as correct to deny the value of surgery in cancer. In leprosy, as in cancer, emphasis must be laid on getting the patient early. It is from this viewpoint that treatment is now revolutionizing anti-leprosy campaign systems."

To the foregoing I add a brief note on leprosy in Brazil where the disease is widely distributed in different parts of the country. A report on the disease has been made for Sao Paulo where the deaths from leprosy have been as follows during the years 1916–26:

MORTALITY FROM LEPROSY IN SAO PAULO, BRAZIL, 1916–26.

Year.	Deaths.	Year.	Deaths.
1916	32	1922	37
1917	27	1923	37
1918	34	1924	42
1919	28	1925	58
1920	42	1926	66
1921	53		

In Sao Paulo the rate per 100,000 of population has increased from 3.07 in 1902–06 to 4.05 in 1907–11, to 5.09 during 1912–16, to 6.73 during 1917–21, being slightly reduced during 1922–26 to 6.04. This increase, however, must not be mistaken for a local increase, since it is probably the result of increased admissions to the leprosarium maintained by the local sanitary department. But it indicates the seriousness of leprosy in a section of the world where, broadly speaking, it was not assumed to prevail to any considerable degree.

WHAT IS PASTEURIZED MILK?

Definition.

Pasteurized milk is defined by state law as milk heated to 140 degrees to 145 degrees Fahrenheit for thirty minutes.

Object.

The only object of pasteurization is to destroy the disease germs which are sometimes found in milk.

Milk–Borne Diseases.

The following diseases are known to be milk-borne: Tuberculosis, typhoid fever, scarlet fever, diphtheria, septic sore throat, foot-and-mouth disease, dysentery, and other intestinal troubles, especially in infants. To this long list has recently been added epidemic arthritic erythema and undulant fever. Three small outbreaks of infantile paralysis have been traced to raw milk.

In the last twenty years over six hundred milk-borne epidemics have been reported in this country. Who can say how many have occurred unrecognized!

Pasteurization spells protection so far as these diseases are concerned.

Official Supervision.

Our regulations provide ample authority to insure adequate pasteurization. They also safeguard the cleanliness of milk before pasteurization. Both the local and state health authorities are responsible for the enforcement of our pasteurization laws.

Inspection.

Milk should be inspected even though pasteurized. Pasteurization does not remove the need of sound cows, healthy milkers and clean dairy methods. Milk is subject to official inspection from pasture to pail and from pail to palate. Through inspection our supply is steadily improving. Inspection provides for cleaner, fresher and better milk, but not necessarily safe milk. Raw milk, however carefully handled, has frequently caused disease. There is no record of milk-borne epidemic due to properly pasteurized milk.

Digestibility.

Pasteurized milk is quite as digestible as raw milk; in fact, the heat of pasteurization produces no appreciable physical or chemical change. Pasteurized milk is quite as nourishing.

Pasteurization and the Vitamines.

Pasteurized milk is a good source of some of our vitamines. Whether milk for infants is raw or pasteurized it should be supplemented with orange or tomato juice to prevent scurvy, and sunshine and cod-liver oil to prevent rickets. There can be no more objection to the heating of milk than there is to the cooking of meat.

Pasteurization is the simplest, cheapest and most effective way of giving you and your family protection of your most important single food product. Pasteurization saves lives and prevents sickness.

— By Milton J. Rosenau, M. D.,
Professor of Preventive Medicine and Hygiene,
Harvard Medical School.

A "SETBACK IN MID-LIFE" MORTALITY.

How the Span of Life is Increasing.

During the current decade, the death rate of adults has been increasing. Only at birth was the expectation of life (mean after-life time) in 1927 higher than in 1921. That the infant born in 1927 had a longer life expectation than the baby of 1921 is due entirely to the improvement in the death rate up to age thirty-seven; after this age, conditions of mortality have not improved. —*Bulletin, Metropolitan Life Insurance Company.*

SUMMARY OF WORK, MAY, 1929.

ADMINISTRATION DIVISION.

Legal notices	2	Personnel:	
Settlements:		Resignations	2
Total cases	148	Removal of employee	1
Notices	119	Permanent appointments	7
Bills	29	Salaries increased	174

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,143	Beverage	1
Denatured alcohol	231	Grease	16
Hen licenses	71	Dumps granted	3
Manicure-massage granted	441	Milk	2,604
Ice cream manufacturers	51	Pedlers	164
Ice cream manufacturers refused	3	Garbage transportations	2
Ice cream dealers	436	Hearing, stable	1
		Culture station established	1

MEDICAL DIVISION.

Reported cases	1,674	Visits:	
Nonresidents	77	By V. D. investigator	313
Deaths investigated	16	By medical inspectors to cases of communicable disease	449
Vaccinations	200		
* Miscellaneous	131		

* In connection with smallpox outbreak.

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	864
Tuberculosis	484
Typhoid	45
Gonorrhea	871
Gonorrheal ophthalmia	74
Syphilis	1,219
Other examinations*	356
Bacteriological examinations of milk	405
Dark field	2
Genito urinary T. B.	28
Malaria	4

* Urines, 299; Vincent's angina, 5; feces for B. typhosus, 19; urine for B. typhosus, 19; swimming pools examined, 80; clams for B. Coli score, 4; paratyphoids, 2; miscellaneous, 8.

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores during May, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as certified milk, or pasteurized as certified milk — pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content o not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.38	3.85	6,500
Antetomasso, Peter	12.57	3.99	8,500
* Bancroft, Hugh	13.49	4.38	14,000
Brandley, F. J. & P. J.	12.54	3.98	150
Buxton, William E.	12.73	3.93	13,500
Casey, James	12.24	3.65	35,500
Cashin, James F., & Co.	12.51	3.85	12,500
Cedar Hill Farm, Inc.	12.12	3.55	3,000
Chapin, George L.	12.60	3.90	13,000
Clark, Levi	12.15	3.70	13,000
Corkery, John J.	12.59	4.05	46,000
Cosgrove, Martin S.	13.28	4.55	28,500
Cummings, Francis S., Company	12.30	3.75	11,500
Daley, John	12.01	3.53	207,000
Dean, Louis W.	13.44	4.36	12,000
Deerfoot Farms Company	12.82	4.11	22,000
Denehy, Timothy	12.52	3.78	11,500
Driscoll, William B., Company	12.49	3.95	12,500
Edgerly, Frank S.	12.71	4.10	14,500
Elm Spring Farm Company	12.38	3.84	12,500
Ferguson, Malcolm D.	13.68	5.13	5,750
* Garfield, Mason	14.86	5.68	10,000
Garvin, Charles E.	15.74	6.40	11,500
Giroux, J. E. & H. J.	12.33	3.71	12,000
Griffin, Joseph L.	12.70	3.94	7,200

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, Chester W	12.67	3.93	15,500
Hampden Creamery Company	12.71	3.65	17,000
Herlihy Brothers, Inc	12.43	3.89	22,000
Hickey, James B	12.12	3.65	14,000
Holden, John E	12.48	3.83	30,500
Hood, H. P., & Sons, Inc	12.37	3.84	11,500
Hutchinson, Frank T	12.27	3.70	10,000
Jones, William T., Company	12.65	3.98	17,000
Kendall Brothers	12.26	3.73	17,000
Kingston Brothers	12.27	3.67	15,000
Knapp, George J	12.20	3.69	12,000
Lang Brothers	12.39	3.96	68,000
Larsson, Charles	12.79	4.35	26,500
Lyndonville Creamery Association	12.67	3.96	20,000
Manning, Harriet	12.23	3.62	5,000
McAdams, J. F., & Brothers, Inc	12.66	4.06	7,200
McKernan, James	12.42	3.78	9,300
Munchback, Albert W	12.45	3.79	10,500
* New England Creamery Products Company	12.71	4.05	21,000
Robinson, A. J	13.02	4.19	15,000
Schuster, Adam	12.29	3.77	17,500
Seven Oaks Dairy Company	12.34	3.76	15,000
Shick, Jacob	12.42	3.67	10,000
Somerset Farms Creamery Company	12.93	4.10	15,000
Sterling Farms Milk Company	12.36	3.70	24,500
Stone, H. L	12.35	3.83	5,100
Stuart, W. E., Company	12.74	4.03	8,300
Turner Centre System	12.55	3.83	12,500
United Farmers Cooperative Creamery Company	12.64	4.13	11,500
* Walker-Gordon Laboratory Company	12.62	4.03	75
Weiler, E., & Sons	12.51	4.00	12,500
Westwood Farms Milk Company	12.31	3.83	17,000
White Brothers	12.76	4.05	14,000
Whiting Milk Companies	12.33	3.75	13,000
Whittemore, W. D	12.78	3.94	12,500
Williams, Edward C	12.49	4.08	19,000
Wiswall, Granville A	12.37	3.80	23,000
Woodland, Charles L	12.29	3.85	11,000

* Milk from tuberculin tested cows.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids.	Fat.	Bacteria in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.27	3.78	18,000
Brown, M., & Sons.....	Whiting Milk Companies...	12.16	3.63	16,000
Cloverdale, The, Company.....	Turner Centre System.....	12.43	3.68	14,000
Economy Grocery Stores Corporation.	Whiting Milk Companies...	12.25	3.68	12,500
First National Stores, Inc.....	Bellows Falls Cooperative Creamery.	12.83	4.00	12,000
Morgan Brothers Company....	New England Creamery Products Company.	12.43	3.82	15,500
Winer, M., Company.....	M. Winer Company.....	12.65	3.97	36,000

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids.	Fat.	Bacteria in in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Antetomasso, Peter.....	12.91	4.37	10,500
Cosgrove, Martin S.....	13.31	4.53	18,500
Cummings, Francis S., Company.....	12.86	4.25	9,500
Dean, Louis W.....	13.54	4.20	3,100
Elm Spring Farm Company.....	12.98	4.35	8,000
Griffin, Joseph L.....	13.13	4.27	15,000
Herlihy Brothers, Inc.....	12.32	4.15	6,000
Hood, H. P., & Sons, Inc.....	12.72	4.22	4,300
Jones, W. T., Company.....	13.27	4.45	4,600
McAdams, J. F., & Brothers, Inc.....	12.86	4.44	9,700
Robinson, A. J.....	13.34	4.40	19,000
Seven Oaks Dairy Company.....	12.88	4.10	9,300
Sterling Farms Milk Company.....	13.14	4.38	28,500
Turner Centre System.....	13.17	4.41	4,900
Weiler, E., & Sons.....	12.83	4.23	5,600
White Brothers.....	12.96	4.38	6,000
Whiting Milk Companies.....	12.55	4.08	12,000
Woodland, Charles L.....	12.37	4.20	11,500

CERTIFIED MILK.

Raw milk, produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	13.11	4.18	4,400
Cummings, Francis S., Company.	Alta Crest	12.90	4.10	1,200
Hood, H. P., & Sons, Inc.	Own	13.11	4.17	930
New England Creamery Products Company.	Bellows Stock Farm	12.60	3.80	900
Walker-Gordon Laboratory Company.	Own	12.44	3.90	3,400
Whiting Milk Companies	Hampshire Hills	13.18	4.45	1,000

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.25	3.65	425
Hood, H. P., & Sons, Inc.	Own	13.01	4.03	100

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:

Milk from wagons	586
Milk from stores	815
Milk brought by citizens	20
Vinegar	75
Ice cream	11
Miscellaneous examinations	3
Samples referred to Bacteriological Laboratory for examination	517
Court cases	15
Fines	$120

TO PHYSICIANS.

Look over your records for the past year and find out if there are any births that were attended by you that have not been registered with the City Registrar. This is a legal and moral obligation on your part, and such registration is of vital importance for its value to the child and its parents, and for the record of your city in its standing among the cities of the country and the world with respect to its infant mortality rate.

If you have any such unregistered births make the returns to the City Registrar, and if you have any about which you are in doubt send duplicates of them to him. Have all of your births registered.

DAIRY DIVISION.

Total services	1,579	Total cattle inspected	13,273
Dairies inspected	930	Inspections of milk plants and licensed dealers	279
Scoring above 50 *	658	Bacteriological examinations	214
Scoring below	272	Country creamery inspections	17
With milk rooms	726	Sediment tests	114
Without milk rooms	204		
Inactive	22		

* Passable mark.

FOOD INSPECTION DIVISION.

MAY, 1929.

District inspections	2,987
Reinspections	549
Market inspections	1,476
Terminal inspections	33
Vehicle inspections*	5,665
Stand inspections	1,689
Complaints	23
Notices to abate	276
Cases in court	2
Convictions	2
Fines	$35
Samples taken	26

*This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market

ABATTOIR DIVISION.

Cattle inspected	3,154	Parts condemned (lbs.)	30,428
Calves inspected	6,308	Animals condemned	103
Swine inspected	3,657		

SANITARY DIVISION.

Original inspections	2,612	Complaints investigated	613
Reinspections	7,859	Nuisances abated	2,155
Legal notices served	223		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	17	191	194	385	29	25	54
East Boston	12	65	109	174	9	31	40
North End	13	45	136	181	10	19	29
West End	14	57	69	126	12	11	23
South Boston	14	74	114	188	22	23	45
Boston Dispensary	9	30	14	44	11	1	12
Brighton	8	16	17	33	5	4	9
Charlestown	9	33	53	86	9	13	22
Codman square	13	112	139	251	25	25	50
Hyde Park	9	42	39	81	5	7	12
Totals	118	665	884	1,549	137	159	296

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	48	30	248	210
East Boston	34	9	42	—
North End	34	4	100	117
West End	12	6	—	—
South Boston	28	17	177	55
Boston Dispensary	5	7	—	—
Brighton	3	—	—	—*
Charlestown	11	4	—	—*
Codman square	36	9	—	—*
Hyde Park	11	5	—	—*
Totals	222	91	567	382

*No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING MAY, 1929.

Classification.	Number.	Percentage.
After death	20	30.30
Seven days or less	7	10.61
Eight to fourteen days, inclusive	3	4.54
Fifteen to twenty-one days, inclusive	1	1.52
Twenty-two to thirty-one days, inclusive	1	1.52
Within First Month. (Total)	32	48.49
Within second month	7	10.61
Within third month	2	3.03
Within fourth month	—	—
Within fifth month	1	1.52
Within sixth month	1	1.52
Within seventh month	3	4.54
Within eighth month	—	0.01
Within ninth month	2	3.03
Within tenth month	3	4.54
Within eleventh month	—	—
Within twelfth month	2	3.03
Within First Year Preceding Death. (Total)	53	80.31
Within second year	4	6.06
Within third year	3	4.54
More than three years	6	9.09
Grand totals	66	100.00

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection?

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, May, 1929.

Inspections made	704
Physical examinations	342
Schick tests (parochial schools)	1,863
Toxin-antitoxin administrations (parochial schools)	2,026
Vaccinations	979
Vaccination certificates issued	280
Day nursery visits	46

NUMBER OF CONFERENCES AND ATTENDANCE.

Station.	Number of Babies.	Number of Pre-school (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	285	53	338	19	—	19	4	85
31 Lincoln street, Brighton	122	31	153	15	5	20	4	38
Charlestown Municipal Building	349	33	382	37	4	41	9	42
Codman Square Library	614	102	716	131	8	139	9	80
Columbia Road Municipal Building	544	31	575	54	4	58	9	64
1 Arcadia street, Dorchester	287	90	377	38	—	38	8	47
East Boston Health Unit	380	51	431	100	10	110	8	54
Hyde Park Municipal Building	224	21	245	28	3	31	8	31
Curtis Hall, Jamaica Plain	250	36	286	48	5	53	5	57
41 North Margin street	255	119	374	28	17	45	8	47
Roslindale Municipal Building	290	65	355	37	5	42	4	89
Children's Hospital	126	9	135	23	2	25	4	34
1049 Columbus avenue	331	23	354	39	2	41	8	44
Vine Street Municipal Building	463	29	492	62	6	68	8	62
133 Dorchester street, South Boston,	360	59	419	68	14	82	8	52
122 Tyler street	106	29	135	16	1	17	4	34
Shawmut Avenue Municipal Building,	175	61	236	24	7	31	5	47
57 East Concord street	172	36	208	28	2	30	4	52
17 Blossom street	424	65	489	54	1	55	8	61
Totals	5,757	943	6,700	849	96	945	125	54

TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	13	14	12	39	47
31 Lincoln street, Brighton	1	4	—	5	40
Charlestown Municipal Building	—	—	—	—	115
Codman Square Library	12	21	23	56	403
Columbia Road Municipal Building	7	7	11	25	188
1 Arcadia street, Dorchester	13	19	26	58	91
East Boston Health Unit	—	—	—	—	20
Hyde Park Municipal Building	3	1	—	4	45
Curtis Hall, Jamaica Plain	2	16	17	35	37
41 North Margin street	1	1	1	3	93
Roslindale Municipal Building	1	2	1	4	57
Children's Hospital	6	7	3	16	20
1049 Columbus avenue	4	2	3	9	124
Vine Street Municipal Building	3	4	4	11	168
133 Dorchester street, South Boston	2	2	—	4	123
122 Tyler street	4	5	7	16	31
Shawmut Avenue Municipal Building	2	3	3	8	50
57 East Concord street	5	3	—	8	21
17 Blossom street	4	2	2	8	65
Totals	83	113	113	309	1,738

DENTAL ACTIVITIES AT HEALTH UNITS.

MAY, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	771	643	837	591	771	3,613
Number of treatments by dentists	1,554	851	1,259	1,179	1,014	5,857
Number of treatments by hygienist	110	107	187	9	114	527

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

MAY, 1929.

BOSTON DISPENSARY:
- Calls by district physician 170

BOSTON LYING-IN HOSPITAL:
- Number prenatal clinics 19
- Total attendance 221
- New cases 64

COMMUNITY HEALTH ASSOCIATION:
- Homes visited 10,872
- Cases referred 521
- Diseases reported 9
- Number of meetings of mothers' club 22
- Attendance 273

STATE DEPARTMENT OF MENTAL DISEASE:
- Number of clinics 5
- Attendance 57
- Number of clinics 10

CHILDREN'S HOSPITAL:
- Number of clinics 17
- Attendance 128
- New cases 19

BOSTON HEALTH DEPARTMENT:

Refraction Service:
- Number of refractions 86
- Glasses prescribed 30
- New cases 25
- Diagnosis 83

Nose and Throat Service:
- Number of clinics 4
- Attendance 226

Number of meetings of mothers' club 3
- Attendance 50

NURSING SERVICE.

HOMES VISITED		15,959
CHILD HYGIENE:		
Visits to new cases	1,425	
Visits to old cases	9,571	
Total		*10,996
COMMUNICABLE DISEASES:		
Visits to new cases	1,053	
Visits to old cases	1,962	
Total		†3,015
TUBERCULOSIS:		
Visits to new cases	272	
Visits to old cases	4,029	
Total		‡4,301
MISCELLANEOUS:		
Infant death investigations	76	
Maternal death investigations	5	
Patients accompanied to hospital	42	
Visits to day nurseries	55	
Visits to parochial schools	534	
Special visits	2	
Total		714
Total number of visits		19,026

	Hrs.	Min.
Hours at station by nurses	3,721	15
Hours at baby and P. S. conferences	1,863	40
Hours at tuberculosis clinics	632	25
Total number of hours	6,217	20

* Includes 77 wrong addresses; 984 not seen; a total of 1,061 absent visits.

† Includes 35 wrong addresses; 88 not seen; a total of 123 absent visits; 166 ophthalmia visits were also made.

‡ Includes 30 wrong addresses; 425 not seen; a total of 455 absent visits. 1,994 visits to positive cases; 1,210 to contact cases and 650 to suspect cases were made.

HOW TO KEEP WELL.

Keep clean and wash your hands before eating and as often as possible.

Avoid crowds as much as possible. Influenza is spread by persons before they begin to feel sick. Keep away from persons who have coughs, colds or sore throats. It is such complications of influenza which make influenza dangerous. Do not use common towels or drinking cups and be sure that all eating and drinking utensils at home and elsewhere have been sterilized in boiling water or steam. Do not patronize dirty eating places or refreshment counters.

VITAL STATISTICS, MAY, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING MAY, 1929, WITH COMPARATIVE FIGURES FOR MAY, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	944	1,184	—240	14.06	17.78	—3.72
Nonresidents deducted	749	986	—237	11.16	14.80	—3.64
By Age:						
Under one year	97	161	—64	1.44	2.42	—.98
One year to four years, inclusive	40	67	—27	.59	1.01	—.42
Sixty years and over	394	477	—83	5.87	7.16	—1.29
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	58	61	—3	.86	.91	—.05
Arteriosclerosis	25	18	+7	.37	.27	+.10
Heart disease	184	261	—77	2.74	3.92	—1.18
Nephritis, chronic	59	73	—14	.88	1.10	—.22
Infant and Maternal Mortality:						
a. Total registered live births *	1,308	1,364	—56	19.49	20.48	—.99
b. Registered stillbirths	37	39	—2	.55	.58	—.03
Stillbirths per 1,000 births and stillbirths †				27.51	27.80	—.29
c. Deaths of mothers from causes incident to childbirth	8	14	—6	.12	.21	—.09
Deaths of mothers per 1,000 births and stillbirths †				5.95	9.98	—4.03
Deaths of children in first year of life	97	161	—64	1.44	2.42	—.98
Deaths in first year per 1,000 live births †				74.16	118.03	—43.87
Violence:						
Accidents	46	45	+1	.63	.67	+.01
Homicides	—	—	—	—	—	—
Suicides	9	10	—1	.13	.15	—.02
Miscellaneous:						
Alcoholism, acute or chronic	7	14	—7	.10	.21	—.11
Broncho-pneumonia	41	106	—65	.61	1.59	—.98
Cancer	136	100	+36	2.03	1.50	+.53
Cirrhosis of the liver	8	9	—1	.12	.13	—.01
Diabetes mellitus	19	17	+2	.28	.25	+.03
Diarrheal diseases, children under two years of age	7	22	—15	.10	33	—.23

* Subject to increase. † Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	3	—	+3	.04	—	+.04
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	7	4	+3	.10	.06	+.04
Deaths.	4	4	—	.06	.06	—
Diphtheria.....Cases..	100	101	—1	1.49	1.52	—.03
Deaths.	9	8	+1	.13	.12	+.01
Influenza.....Cases..	7	68	—61	.10	1.02	—.92
Deaths.	4	15	—11	.06	.22	—.16
Measles.....Cases..	128	546	—418	1.91	8.20	—6.29
Deaths.	2	12	—10	.03	.18	—.15
Pneumonia (lobar).....Cases..	115	194	—79	1.71	2.91	—1.20
Deaths.	41	79	—38	.61	1.19	—.58
Scarlet fever.....Cases..	274	320	—46	4.08	4.80	—.72
Deaths.	2	3	—1	.03	.04	—.01
Tuberculosis (pulmonary).....Cases..	139	137	+2	2.07	2.06	+.01
Deaths.	58	73	—15	.86	1.10	—.24
Tuberculosis (other forms).....Cases..	44	40	+4	.65	.60	+.05
Deaths.	9	9	—	.13	.13	—
Typhoid fever.....Cases..	7	5	+2	.10	.07	+.03
Deaths.	1	—	+1	0.15	—	+.015
Whooping cough.....Cases..	192	125	+67	2.86	1.88	+.98
Deaths.	—	4	—4	—	.06	—.06

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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SUNLIGHT AS A DISINFECTANT.

The Bulletin of the Detroit Department of Health, "City Health," for March, 1929, describes the results of some ingenious experiments for demonstrating the bactericidal effects of sunlight. The experiments were conducted by F. M. Meader, M. D., Director, Medical Service, Detroit Department of Health.*

Petri dish cultures of the staphylococcus aureus in agar-agar were used for the purposes of demonstration. The dishes were covered by cardboard in which an opening was cut, thus leaving the portion of the culture beneath exposed to the light. In the experiments, growth of the staphylococcus aureus was arrested in the portions of the cultures struck by light.

These experiments served to demonstrate in a very striking way that growth of the staphylococcus aureus ceased on exposure to daylight or diffused sunlight as well as to direct sunshine. It was also made to appear that the rapidity with which the result is accomplished was determined by the relative amount of the shorter light waves in the sunlight. In this way the experiments tended to confirm generally accepted belief in the bactericidal

* Doctor Meader's experiments were presented in a paper read before the Wayne County Medical Society, May 11, 1926. The "Bulletin" article was reprinted from the "Journal of the Michigan State Medical Society," December, 1926.

efficiency for the shorter light waves, or what is popularly comprised in the term ultra-violet rays.

Daylight coming into a room in which direct sunshine never entered, if given sufficient time, stops the growth of the exposed staphyloccocus aureus. This occurs apparently because enough of the shorter light waves pass through ordinary window glass to act slowly in killing the staphylococcus aureus. The most rapid arrestation of growth occurred, however, as might be expected, on exposure to direct sunshine about the middle of the day.

The experiments indicated that at Detroit about the first of May, owing to the atmospheric absorption of the shorter light waves before 9 a. m. and after 3 p. m., the sunlight was practically without bactericidal effect and that during the shorter days of the year the bactericidal effect of sunlight was only operative from about 11 a. m. to 1 p. m.

The Detroit "Bulletin" article concludes with an admirable brief exposition of the nature and sources of radient energy and of the theory of its bactericidal action.

The article also contains a suggestion that by making use of the bleaching effect of ultra-violet rays on methylene blue, city health officials have it within their power to measure the disinfecting power of the sunlight at any time or place by exposing small quartz glass vials of a solution of methylene blue and noting the time required for it to become colorless. This suggestion serves to recall experiments made in the same field at Boston.

Prof. W. T. Bovie, now of the Northwestern University, devised an apparatus for determining the amount of ultra-violet radiation in diffused sunlight while working with the Boston Conservation Bureau, which was made a division of the Boston Health Department. Professor Bovie's apparatus made it possible to calculate the relative amount of the shorter light waves in terms of definite units. It was believed to have a sphere of practical usefulness in furnishing tangible evidence of the unhealthiness of certain quarters of the city not only with respect to a deficiency in the disinfecting power of the atmosphere in which people may be living, but in its lack of anti-rachitic properties as well.

In his apparatus, Professor Bovie made use of a different principle from that of the power of actinic rays to produce chemical changes, but it would seem that the simpler idea of observing the time required for a chemical solution in a quartz bottle to change in color might be very effectively utilized by municipal health officers for certain practical purposes. In order, however, that such observations may not be discredited, proper consideration must be given to the preparation of the solution and to the fact that com-

mercial quartz glass varies greatly in its capacity to transmit shorter light waves. Moreover, the same glass is likely to change in this respect.

There are also other matters which the Detroit "Bulletin" brings up for practical consideration. Are all pathogenic bacteria equally vulnerable to light? The theories as to the cause of the bactericidal action of light indicate that they are not. Theories would also suggest that there may be a difference in the molecular condition of the same sort of bacteria which may account in a difference in vulnerability to light. Still other factors may possibly have served to promote or retard the results reported in the Detroit experiments. For example, may not the relative amount of moisture or the opportunity offered for the evaporation of moisture from a portion of a culture have been factors in the arrestation of growth in the time noted?

The staphylococcus aureus was used in these experiments. The bactericidal effects of ultra-violet rays have been likewise well demonstrated with other bacteria and in other ways. Such experiments have made it apparent that light, whether from the sun or artificial sources, does not have the degree of practical dependability as a disinfectant which might be inferred from the experiments with the staphylococcus aureus in the Detroit experiments.

Epidemic cerebrospinal meningitis became a matter of serious military importance on various occasions during the World War. The disease is now attracting the attention of public health officials by reason of its evident widespread tendency during the past few years to increase in prevalence. Rosenau, whose experience with this disease during the war would seem to entitle his views to special consideration, has the following to say: "The effect of sunlight on the meningococcus is rather surprising. Elser and Huntoon found that some strains survived eight or nine hours' exposure. . . . All strains survived one or two hours' exposure to full sunlight."*

Yet such testimony regarding the resistance of the meningococcus to ultra-violet rays must be reconciled to the fact that the organism is so fragile and so easily killed by various agents that its successful transfer from a human host to a laboratory culture media calls for special skill and care. Furthermore, in spite of apparent resistance of the meningococcus to sunshine in artificial experiments, human carriers may be expected to clear up quickly with the advent of warm weather. During the war, at the United States Quarantine Station, Boston, meningococci promptly disappeared from carriers on the occurrence of a few warm sunny days in early May after

* "Preventive Medicine and Hygiene," by Milton J. Rosenau, fifth edition, 1927, page 255.

many experimental methods of treatment, which was being carried on for two months and longer, had proved futile.

It is easy to draw unwarranted deductions from experimental evidence of the disinfecting efficiency of light or of any other disinfecting agents. For years, Boards of Health trusted implicitly to the efficacy of burning sulphur and other gaseous products to disinfect human habitations. The occasional instances when the SO_2 or formaldeyhyde apparently failed to prevent a recurrence of the disease on the premises were charged to faulty technique. The evidence of living bacterial cultures, which doubting Thomases from time to time brought out of officially disinfected rooms, was officially ignored. Pathogenic bacteria, like other parasitic plants, tend rapidly to die, or at least lose their power to do harm, as soon as they are subjected to any conditions unfavorable for their growth. It is really a difficult matter to determine just how much this outcome has been hastened by any disinfecting agent which we may employ for this purpose. On the other hand, we may find that in certain instances, such bacteria retain their viability and virulence with unlooked for tenacity because of some physical conditions or other factors which we may not understand.

One well qualified to testify in the matter tells us that he has known pneumococci collected in room dust and placed in an open petri dish on a shelf in a warm steam-heated sunny room of a laboratory, to be found to have retained their viability for culture purpose for more than three weeks. Another, likewise well qualified to testify, tells us that he has found in certain strains of a common form of streptococci a resistance to a degree of heat in an autoclave that he would only expect to find in spore-bearing bacteria. In a test made to determine the possible danger to the transmission of contagious diseases by books, a diphtheria culture divided and placed between the leaves of a book showed a range in viability from two to more than ten days in different parts of the book. An unvaccinated person coming to the living quarters of the caretaker of a municipal smallpox hospital six months after the last case has been discharged from the institution developed smallpox under conditions pointing conclusively to infection from some unknown source about the institution.

The disinfecting power of sunshine or any other disinfecting agent cannot for practical purposes be definitely expressed in units of time. While pathogenic parasitic bacteria tend rapidly to become inoccuous outside their living host, they may occasionally exhibit an unexpected viability for reasons which may not be apparent.

Therefore, when it becomes necessary to depend upon the efficacy of any disinfecting agent for any particular purpose, it is

always advisable to adopt the principle of the bridgebuilder and allow a liberal factor of safety not only by prolonging the exposure of infective material to the disinfecting agent but even by reinforcing the action of one agent by that of another.

THE MILK CONSUMER'S RESPONSIBILITY.

It is practically impossible for the Health Department to supervise the care of the milk after it reaches the consumer. The housewife must assume the responsibility for this. Many complaints of bad milk are laid at the doors of the producers when housewives themselves are to blame by reason of ignorance or carelessness in the handling of milk after it reaches the home.

The consumer should accept no system of delivery which does not bring milk into the home in bottles. All other methods of handling and delivery are obsolete and represent ignorance or carelessness on the part of the dairyman.

There are four general conditions to avoid in handling milk in the home:

1. Placing milk in unclean utensils. Whenever possible milk should be kept in the original container. After the cap on the bottle is removed, another made of paper may be used or the mouth of the bottle may be covered with an inverted drinking glass. The pouring of milk from the bottle to another container, usually not thoroughly clean, means the addition of bacteria and quicker spoilage of the product. Milk should not be poured from the original container unless it is to be used immediately.

2. Exposing milk unnecessarily to the air. Exposure of milk to the air means an increase in bacteria and in foreign material. It also means the absorption of odors from unclean refrigerators and from such food as fish, cabbage or onions.

3. Failure to keep milk cold up to the time of using. It is the duty of dairymen to deliver cold milk. Unless the housewife receives the milk personally when delivered, she should have an insulated porch box for holding the milk and keeping it cold. A simple inexpensive arrangement can easily be made by placing a small box or tin pail inside another larger box or pail and filling the space between with sawdust. A tight-fitting cover, insulated with newspaper, should be made. Keep the bottle of milk in the refrigerator and remove only for immediate use.

4. Exposing milk to flies. Under no circumstances should milk be exposed to flies. The presence of flies in milk not only makes it filthy, but exposes the person who drinks it to the possible danger of contagious disease.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Erysipelas.

This is an acute infectious disease widely prevalent throughout the country, but rarely in a proportionate number of cases terminating in death. Nevertheless the annual mortality from erysipelas in the United States registration area is about 2,600, equivalent to a rate of 2.5 per 100,000 of population. The rate within recent years has shown a tendency to decline, having been as high as 4.2 per 100,000 during 1906–10 and 3.8 per 100,000 during 1911–15. Since 1916 the deaths and death rates have been as follows:

DEATHS FROM ERYSIPELAS, UNITED STATES REGISTRATION AREA, 1916–27—RATE PER 100,000.

Year.	Deaths.	Rate.	Year.	Deaths.	Rate.
1916	2,680	3.8	1922	2,593	2.7
1917	2,866	3.8	1923	2,503	2.7
1918	2,603	3.2	1924	2,458	2.5
1919	2,186	2.6	1925	2,455	2.4
1920	2,721	3.1	1926	2,680	2.5
1921	2,501	2.8	1927	2,567	2.4

The mortality rates for the United States may be compared with those of England and Wales for 1917–27, which have been as follows:

MORTALITY FROM ERYSIPELAS, ENGLAND AND WALES, 1917–27—RATE PER 100,000.

Year.	Rate.	Year.	Rate.
1917	1.7	1923	1.6
1918	1.7	1924	1.7
1919	1.8	1925	2.2
1920	2.2	1926	2.1
1921	1.9	1927	2.1
1922	1.8		

In England and Wales the mortality of males and females is practically the same, the respective rates having been 2.2 for males and 2.0 for females. The rates are, therefore, somewhat lower than the rates for this country at the present time. For England it will be observed that the rates have increased from 1.7 in 1917 to 2.1 in 1927, against a decline in this country from 3.8 in 1916 to 2.5 in 1926.

In the experience of the United States Army during the World

War, there were 2,426 admissions on account of erysipelas, equivalent to a rate of 0.06 per 1,000 enlisted men. There were 35 deaths equivalent to a death rate of 0.01 per 1,000, equivalent to a case fatality percentage of 1.44. This will emphasize the relatively low mortality and the widespread frequency of erysipelas in the general population. The sex distribution in this country in the registration states with distinction of race in 1925 was as follows: The number of deaths from erysipelas of white males was 1,233 and of white females, 1,071; of colored males, 68, and of colored females, 48. The age distribution by divisional periods of life for both sexes and races combined was as follows:

MORTALITY FROM ERYSIPELAS, UNITED STATES REGISTRATION STATES BY DIVISIONAL PERIODS OF LIFE.

Age.	Deaths.	Age.	Deaths
Under 5	827	55–59	139
5–9	19	60–64	159
10–14	26	65–69	184
15–19	46	70–74	135
20–24	38	75–79	138
25–29	43	80–84	85
30–34	72	85–89	40
35–39	66	90–94	16
40–44	100	95–99	4
45–49	122	100 and over	1
50–54	159	Unknown	1

It is shown by this tabulation that out of 2,420 deaths from erysipelas, 927, or 38.3 per cent, occurred at ages under 5. Most of these deaths, or to be specific, 710 of the 927 occurred at ages under one. The disease is shown to be distributed throughout the whole of life, reaching, however, a second maximum frequency at ages 65–69. There was even one death at ages 100 and over. This age distribution is somewhat at variance with the tabulation of one thousand cases given in the "Handbook of the Medical Sciences" by Erdman, showing the following distribution. Infants under two years, 8 per cent; 2–15, 2 per cent; 15–20, 5 per cent; 20–55, 85 per cent and over 55, 3 per cent.

The diseases is differentiated into (1) facial erysipelas, (2) migratory form, (3) erysipelas of the entire respiratory and alimentary tracts, which, however, is very rare, and (4) gangrenous, phlegmonous, etc., rather being considered complications or sequelæ. As regards the pathology of erysipelas, I quote from Erdman the following:

"Erysipelas is essentially a streptococcus skin infection, with the inflammation located in the true skin and marked by infiltration with leucocytes, by edema, by proliferation of the fixed connective-tissue cells, and with the streptococci commonly to be found in the lymph spaces of the advancing border and in the blebs on the surface.

"Extension to the subcutaneous tissues is more commonly attended by suppuration, but suppuration occurs in less than 10 per cent of the cases, which is remarkable when we consider the character of the infecting organism.

"The inflammation tends to spread peripherally while recession and recovery are taking place in the center."

As regards prognosis, Erdman observes that, "Uncomplicated erysipelas is a self-limited disease with tendency to recovery, and the mortality should never exceed five per cent." As a matter of fact, in the army experience the mortality was only 1.41 per cent. In general hospital cases, according to Erdman, with many complications and many alcoholics, the mortality may rise to 6.57 per cent. This is based upon 1,810 cases collected by Anders, but 11.6 per cent is shown in the 800 cases at Bellevue Hospital. In Erdman's survey, infants under one year have a higher fatality rate but not so high as has been reported by some writers of 75 per cent. It has been pointed out that the proportionately largest number of deaths had occurred at ages under five. Complicating factors which increase the liability to death in erysipelas are alcoholism, pneumonia, sepsis, and accompanying nephritis, endocarditis and tuberculosis.

The whole subject of leprosy in the United States has just been reviewed by Dr. Ralph Hopkins and Dr. Oswald E. Denney, of Carville, in the "Journal of the American Medical Association" for January 19, 1929, with discussions by Doctors Musser, Michelson, Wile, Pusey and Denney.

Acute and Chronic Alcoholism.

No mortality question is more difficult to deal with than acute and chronic alcoholism as a cause of death. Most such deaths are complicated by other diseases or impairments which are given the preference on the death certificate, thus precluding a satisfactory analysis, especially with reference to the effect of prohibition. Yet something may be learned from the figures which are available for this and other countries which present some startling aspects. The table following shows the mortality from acute and chronic alcoholism as reported by the Bureau of the Census 1916–27, with the rates per 100,000 of population.

MORTALITY FROM ACUTE AND CHRONIC ALCOHOLISM, UNITED STATES REGISTRATION AREA, 1916–1927. RATES PER 100,000.

Year.	Deaths.	Rate.	Year.	Deaths.	Rate.
1916	4,161	5.8	1922	2,467	2.6
1917	3,922	5.2	1923	3,148	3.2
1918	2,220	2.7	1924	3,153	3.2
1919	1,367	1.6	1925	3,694	3.6
1920	900	1.0	1926	4,109	3.9
1921	1,611	1.8	1927	4,372	4.0

This table proves that acute and chronic alcoholism as a cause of death has been rapidly increasing during the last five or six years. The average rate previous to the war or for 1906–10 was 5.8 per 100,000 and for 1911–15, 5.1. In 1916 it was 5.8, going down to a minimum rate of 1.0 in 1920. Since that time the rate has been steadily rising to 4.0 in 1927, not far from approaching the rate for 1916. Our present rate is extremely high as best shown by the returns for certain other countries. The following table gives the mortality from acute and chronic alcoholism for the Commonwealth of Australia. In this case I give the actual deaths only, differentiating males and females.

MORTALITY FROM ACUTE AND CHRONIC ALCOHOLISM, COMMONWEALTH OF AUSTRALIA.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1916 . .	242	64	306	1922 . .	89	16	105
1917 . .	194	28	222	1923 . .	126	27	153
1918 . .	195	33	228	1924 . .	163	40	203
1919 . .	133	32	165	1925 . .	136	24	160
1920 . .	111	29	140	1926 . .	79	16	95
1921 . .	125	17	142				

Here it is shown that since 1916 deaths from acute and chronic alcoholism in that country had diminished from 306 in 1916 to 95 in 1926. In the meantime the population of Australia has increased from about five millions to about six millions. In other words, the present mortality rate from acute and chronic alcoholism in the Commonwealth of Australia is 1.6 per 100,000 against 4.0 for the United States under prohibition.

Still more startling are the rates for England and Wales which are incredibly low considering the widespread drinking habits in that country. In 1917 the rate for England and Wales was 0.6 per 100,000, which has gone down to 0.3 in 1927. In that year there were only 108 deaths from alcoholism in England and Wales, of which 84 were males and 24 females. The population of England and Wales in 1927 was approximately forty millions.

In New Zealand in 1927, there were only 15 deaths from acute and chronic alcoholism. The population of New Zealand in 1927 was approximately one and a half million. If the same rate prevailed in New Zealand as in this country, there would have 60 deaths instead of the 15 which actually occurred. New Zealand has not prohibition as is sometimes assumed to be the case, for in 1926 there were 811 licensed houses, equivalent to 1,262 persons to each licensed house, during that year. In the election of 1925, 319,000 votes were cast for prohibition against 355,000 for continuance of

state purchase and control. The consumption of alcoholic liquors in Australia has increased from 0.36 imperial gallons per capita in 1921–22 to 0.44 in 1925–26. The consumption of wine during the same period remained stationary, with a per capita of 0.50 imperial gallons, while beer likewise has remained about the same or 11.25 gallons per capita. Convictions for drunkenness have undergone no material alterations, being in 1927 at the rate of 97 per 10,000 inhabitants. It is most regrettable that we have no corresponding figures for this country.

In the city of Montreal, in 1927, there were 14 deaths from acute and chronic alcoholism in a population of about 700,000, or at a rate of 2 per 100,000 against 4.0 for the United States. The statistics for Australia and Canada are obviously more applicable for comparison than those of any other country with corresponding conditions in this country.

An interesting sidelight on the problem is furnished by a statement in the Inspection News of the Retail Credit Company which investigates the habits of applicants for life insurance purposes. This company in 1919 made reports upon 130,663 applicants of whom 1,806 or 1.3 per cent were reported as drinking to such an excess as to affect insurability, so that they were declined. As late as 1925 another record was made covering 152,878 life reports. Of this number 1.2 per cent were considered as addicted to excessive drinking habits and recommended to be declined. Still more recently an investigation was made into the present record of 35,089 applicants, of whom 1.4 per cent were reported as subject to excessive drinking habits. Dividing the applicants for the United States and Canada, it was found that among the American applicants, 1.1 per cent were drinking to excess against 1.2 per cent among the Canadian. The figures equal themselves.

A very interesting discussion of alcoholic deaths by Doctor Bigelow, director of public health, State of Massachusetts, appears in the "New England Journal of Medicine" of March 22, 1928. Doctor Bigelow is of the opinion that "Ethyl alcohol, then, is, has been, and always will be a poison which cannot be tolerated by the body in excess, and in the vast majority of cases "alcohol deaths" in Massachusetts are apparently due to excessive use of 'good pure alcohol'." Or in other words of what would be considered good liquor instead of poison liquor. Nevertheless cases in which poison liquor was the cause of death are distressingly common and much more so at the present time than in former years, and more so in this country than in any other country for which the information is available.

THE IMPORTANCE OF RESPIRATORY DISEASES AS A CAUSE OF DISABILITY AMONG INDUSTRIAL WORKERS.

A large electric light and power company which pays full wages to its employees who are disabled by sickness keeps a record of the diseases which cause time lost from work. It was found that more than one half of all the absences on account of sickness among the men in the employ of the company was caused by diseases of the respiratory system, the more common of which are the ordinary cold, sore throat, tonsilitis, bronchitis, influenza or grippe, and pneumonia.

As a cause of absence from work among employees of this company, no other disease group approached in importance the respiratory diseases. In fact, the respiratory diseases caused more absences than all other diseases combined.

The records of employees' benefit associations scattered over the northern and eastern part of the United States tell much the same story. From the recorded experience of other companies having thirty-five different sick-benefit associations, with a combined membership of nearly 100,000 persons, it was found that respiratory diseases caused 47 per cent of all the cases of illness for which sick benefits were paid from 1921 to 1926, inclusive. This source of information covers only the more serious sicknesses, because these associations made payments to their members only when illness caused inability to work for eight days or longer.

Thus, whether we consider all absences from work on account of sickness, or only those illnesses which lasted longer than one week, we find that approximately one half of the cases were some form of respiratory sickness.

The sickness records of the electric light and power company showed, also, that the average loss of time on account of sickness was approximately six days a year per man on the pay roll. Approximately three of the six days lost from work per annum were lost on account of respiratory diseases.

By far the worst offender in the family of respiratory diseases, from the standpoint of time lost, is the common cold, which, according to the record of the company mentioned, caused 70 per cent of the absences resulting from diseases of the respiratory system. Colds caused the disability of four out of ten men annually, and of seven out of ten women each year. It is no wonder we call it the *common* cold.

The incidence of respiratory diseases varies with the seasons. They occur least often in midsummer. During the late summer and

early autumn the number of cases tends to increase. In December or January the increase is usually more rapid, and continues until the seasonal peak of the sickness wave is reached, some time in the month of February. (*U. S. P. H. S.*)

SUMMARY OF WORK, JUNE, 1929.

ADMINISTRATION DIVISION.

Legal notices	205	Personnel:	
Prosecutions	5	Leaves of absence	3
Vacate notices	4	Resignation	1
Proposal accepted	1	Permanent appointment	1
Settlements:		Temporary appointments	5
Total cases	118	Trip authorized	1
Notices	85		
Bills	33		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	938	Grease	1
Denatured alcohol	13	Dumps granted	1
Hen licenses	50	Dumps refused	1
Manicure-massage granted	1,066	Milk	957
Ice cream manufacturers	23	Pedlers	129
Ice cream dealers	252	Garbage transportation	1
Lying-in Hospitals	2	Permit, temporary, stable	1
Undertaker	1	Forcible removals	2
Beverage	1		

MEDICAL DIVISION.

Reported cases	1,437	Visits:	
Nonresidents	63	By V. D. investigator	298
Deaths investigated	18	By medical inspectors to cases of communicable disease	483

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	732
Tuberculosis	347
Typhoid	27
Gonorrhea	787
Gonorrheal ophthalmia	54
Syphilis	983
Other examinations	256
Bacteriological examinations of milk	325
Dark field	2
Genito urinary T. B.	12
Malaria	3

* Urines, 217; Vincent's angina, 8; feces for B. typhosus, 11; urine for B. typhosus, 11; paratyphoids, 2; cultures for virulence, 2; cheese for organisms, 1; smear from nose for gonorrhea, 1; smear for T. B., 1; spinal fluid for organisms, 1; candy for molds, 1; milk bottles examined, 26; caps for milk bottles examined, 72; water from swimming pools examined, 80; water from beaches examined, 33; extra waters, 6.

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores, during June, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as certified milk, or pasteurized as certified milk—pasteurized.

MARKET MILK—PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.60	4.05	32,500
Antetomasso, Peter	12.57	3.96	14,500
* Bancroft, Hugh	13.54	4.45	7,000
Brandley, F. J. & P. J.	12.64	3.95	100
Casey, James	12.21	3.68	29,500
Cashin, James F., & Co	12.49	3.88	12,000
Cedar Hill Farm, Inc.	11.94	3.35	1,700
Chapin, George L.	12.64	3.85	400
Clark, Levi	12.15	3.85	12,500
Corkery, John J.	12.93	4.22	2,550
Cosgrove, Martin S.	12.78	4.03	6,000
Cummings, Francis S.	12.29	3.77	9,000
Daley, John	12.08	3.72	9,500
* Dean, Louis W.	13.42	4.40	1,300
Deerfoot Farms Company	12.62	3.99	12,500
Denehy, Timothy	12.28	3.50	1,950
Driscoll, William B., Company	12.50	3.90	16,500
Edgerly, Frank S.	12.74	4.15	28,000
Elm Spring Farm Company	12.41	3.81	12,000
Ferguson, Malcolm D.	12.22	3.70	47,000
* Garfield, Mason	14.42	5.38	61,500
Garvin, Charles E.	14.53	5.45	500
Giroux, J. E. & H. J.	12.59	3.85	15,500

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Griffin, Joseph L.	12.74	4.01	8,400
Gushee, Chester W.	12.65	3.92	10,000
Hampden Creamery Company	12.77	3.85	29,000
Herlihy Brothers, Inc.	12.29	3.75	107,000
Hickey, James B.	12.21	3.70	13,500
Holden, John E.	12.51	3.74	11,000
Hood, H. P., & Sons, Inc.	12.35	3.86	15,500
Hutchinson, Frank T.	12.29	3.86	23,000
Jones, William T., Company	12.45	3.96	33,000
Kendall Brothers	12.23	3.55	4,800
Kingston Brothers	12.55	3.83	28,500
Knapp, George J.	12.33	3.73	6,000
Lang Brothers	12.28	3.84	94,500
Larsson, Charles	12.27	3.70	10,000
Lyndonville Creamery Association	12.72	4.13	30,500
Manning, Harriet	12.11	3.53	5,500
McAdams, J. F., & Brothers, Inc.	12.64	3.98	15,000
McKernan, James	12.47	3.87	14,500
Munchback, Albert W.	12.25	3.67	23,500
* New England Creamery Products Company	12.78	4.07	80,500
Robinson, A. J.	12.93	4.03	44,500
Schuster, Adam	12.37	3.75	25,500
Seven Oaks	12.35	3.78	8,500
Shick, Jacob	12.58	3.78	12,000
Somerset Farms Creamery Company	12.70	4.05	3,200
Sterling Farms Milk Company	12.54	3.84	11,000
Stone, H. L.	12.35	3.87	8,500
Stuart, W. E., Company	12.71	4.07	15,500
Turner Centre System	12.55	3.88	6,000
United Farmers Co-operative Creamery Company	12.68	4.19	8,500
* Walker-Gordon Laboratory Company	12.30	3.90	50
Weiler, E., & Sons	12.59	4.05	9,500
Westwood Farms Milk Company	12.89	3.80	26,500
White Brothers	12.89	4.28	8,500
Whiting Milk Companies	12.36	3.80	27,000
Whittemore, W. D.	12.60	3.80	27,500
Williams, Edward C.	12.84	4.26	149,000
Wiswall, Granville A.	12.13	3.67	32,000
Woodland, Charles L.	12.87	4.33	6,200

* Milk from tuberculin tested cows.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.33	3.85	20,000
Brown, M., & Sons.....	Whiting Milk Companies...	12.23	3.78	5,500
Cloverdale, The, Company.....	Turner Centre System.....	12.56	3.79	17,500
Economy Grocery Stores Corporation.	Whiting Milk Companies...	12.28	3.67	19,500
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	12.87	4.15	14,500
* Morgan Brothers Company...	New England Creamery Products Company	12.49	3.93	11,500
Winer, M., Company.....	M. Winer Company.....	12.68	4.05	52,500

* Milk from tuberculin tested cows.

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in in One Cubic Centimeter.
Antetomasso, Peter.....	12.74	4.17	14,500
Cosgrove, Martin S.....	13.26	4.50	10,500
Cummings, Francis S., Company.....	12.75	4.21	14,000
Dean, Louis W.....	13.36	4.10	2,400
Elm Spring Farm Company.....	12.99	4.20	6,100
Griffin, Joseph L.....	13.11	4.48	10,000
Herlihy Brothers, Inc.....	12.19	4.00	24,000
Hood, H. P., & Sons, Inc.....	12.51	4.23	2,600
Jones, W. T., Company.....	13.16	4.40	22,000
MacAdams, J. F., & Brothers, Inc.....	13.04	4.50	9,000
Robinson, A. J.....	13.54	4.55	48,000
Seven Oaks Dairy Company.....	12.58	4.00	300
Sterling Farms Milk Company.....	12.79	4.18	6,600
Turner Centre System.....	13.01	4.34	8,500
Weiler, E., & Son.....	12.79	4.35	15,000
White Brothers.....	13.12	4.53	3,000
Whiting Milk Companies.....	12.51	4.08	15,000
Woodland, Charles L.....	12.92	4.23	4,100

CERTIFIED MILK.

Raw milk, produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.74	4.13	5,150
Hood, H. P., & Sons, Inc.	Own	13.05	4.05	1,200
New England Creamery Products Company.	Bellows Stock Farm	12.40	3.80	1,900
Turner Centre System	Alta Crest	12.73	4.03	3,200
Walker-Gordon Laboratory Company.	Own	12.25	3.90	1,400
Whiting Milk Companies	Hampshire Hills	13.44	4.60	8,000

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	11.43	3.25	100
Hood, H. P., & Sons, Inc.	Own	13.16	4.15	100

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:	
Milk from wagons	529
Milk from stores	747
Milk brought by citizens	6
Vinegar	50
Ice cream	48
Water	4
Corn sugar	1
Miscellaneous examinations	4
Samples referred to Bacteriological Laboratory for examination	505
Court cases	15
Fines	$135

HOW TO KEEP WELL.

To Avoid Illness.

Keep clean and wash your hands before eating and as often as possible.

Avoid crowds as much as possible. Influenza is spread by persons before they begin to feel sick. Keep away from persons who have coughs, colds or sore throats. It is such complications of influenza which make influenza dangerous. Do not use common towels or drinking cups and be sure that all eating and drinking utensils at home and elsewhere have been sterilized in boiling water or steam. Do not patronize dirty eating places or refreshment counters.

Avoid visiting the sick. Avoid those that spit or cough promiscuously, whether indoors or outdoors. Use handkerchiefs liberally if you have a cough or cold and be sure to use one to cover a sneeze. All handkerchiefs should be boiled after use. Hands contaminated by handkerchiefs should be washed.

DAIRY DIVISION.

Total services	1,227	Total cattle inspected	9,827
Dairies inspected	775	Inspections of milk plants and licensed dealers	175
Scoring above 50 *	568	Bacteriological examinations	126
Scoring below	207	Country creamery inspections	8
With milk rooms	588	Sediment tests	120
Without milk rooms	187		
Inactive	18		

* Passable mark.

FOOD INSPECTION DIVISION.

JUNE, 1929.

District inspections	3,578
Reinspections	732
Market inspections	1,586
Terminal inspections	414
Vehicle inspections	*6,605
Stand inspections	1,934
Complaints	43
Notices to abate	266
Cases in court	3
Convictions	3
Fines	$30
Samples taken	4

* This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market.

ABATTOIR DIVISION.

Cattle inspected	8,271	Parts condemned (lbs.)	15,533
Calves inspected	3,467	Animals condemned	38
Swine inspected	1,362		

SANITARY DIVISION.

Original inspections	2,843	Complaints investigated	1,093
Reinspections	8,110	Nuisances abated	2,344
Legal notices served	262		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	15	200	133	333	43	25	68
East Boston	13	84	95	179	15	17	32
North End	11	32	61	93	3	6	9
West End	11	31	62	93	4	11	15
South Boston	11	71	56	127	18	7	25
Boston Dispensary	7	20	12	32	9	5	14
Brighton	7	13	20	33	6	2	8
Charlestown	8	15	15	30	6	3	9
Codman square	12	79	56	135	10	11	21
Hyde Park	8	48	28	76	7	2	9
Fields Corner	4	14	23	37	1	—	1
Totals	107	607	561	1,168	122	89	211

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	33	43	114	144
East Boston	24	16	35	45
North End	9	—	66	—*
West End	18	5	—	—
South Boston	11	8	113	72
Boston Dispensary	6	2	—	—
Brighton	3	1	—	—†
Charlestown	5	2	—	—†
Codman square	21	12	—	—†
Hyde Park	2	3	—	—†
Fields Corner	3	4	—	—†
Totals	135	96	328	261

* North End quarters undergoing repairs.

† No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING JUNE, 1929.

Classification.	Number.	Percentage.
After death	10	24.39
Seven days or less	3	7.32
Eight to fourteen days, inclusive	—	—
Fifteen to twenty-one days, inclusive	—	—
Twenty-two to thirty-one days, inclusive	2	4.87
Within First Month. (Total)	15	36.58
Within second month	6	14.63
Within third month	—	—
Within fourth month	1	2.44
Within fifth month	—	—
Within sixth month	1	2.44
Within seventh month	—	—
Within eighth month	2	4.87
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	25	60.96
Within second year	3	7.32
Within third year	3	7.32
More than three years	10	24.39
Grand totals	41	99.99

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection?

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, June, 1929.

Inspections made	253
Physical examinations	473
Schick tests (parochial schools)	52
Toxin-antitoxin administrations (parochial schools)	306
Vaccinations	215
Vaccination certificates issued	253
Day nursery visits	13

NUMBER OF CONFERENCES AND ATTENDANCE.

Station.	Number of Babies.	Number of Preschool (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	265	37	302	39	6	45	4	76
31 Lincoln street, Brighton	93	18	111	9	2	11	4	25
Charlestown Municipal Building	315	22	337	30	3	33	7	48
Codman Square Library	349	63	412	66	12	78	7	59
Columbia Road Municipal Building	427	18	445	47	3	50	7	64
1 Arcadia street, Dorchester	285	21	306	43	3	46	8	38
East Boston Health Unit	336	42	378	81	4	85	7	54
Hyde Park Municipal Building	218	21	239	24	1	25	8	30
Curtis Hall, Jamaica Plain	183	13	196	28	—	28	4	49
41 North Margin street	191	63	254	24	3	27	8	32
Roslindale Municipal Building	205	60	265	28	2	30	3	88
Children's Hospital	126	10	136	19	3	22	4	34
1049 Columbus avenue	325	29	354	55	8	63	8	44
Vine Street Municipal Building	356	13	369	43	4	47	7	53
133 Dorchester street, South Boston,	344	78	422	59	12	71	8	53
122 Tyler street	110	19	129	8	1	9	4	32
Shawmut Avenue Municipal Building,	152	32	184	19	2	21	4	46
57 East Concord street	156	20	176	27	—	27	4	44
17 Blossom street	359	47	406	40	—	40	7	58
Totals	4,795	626	5,421	689	69	758	113	49

TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS.

Station.	Toxin-Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	9	11	14	34	35
31 Lincoln street, Brighton	—	—	4	4	9
Charlestown Municipal Building	1	1	—	2	13
Codman Square Library	17	12	11	40	59
Columbia Road Municipal Building	9	4	14	27	78
1 Arcadia street, Dorchester	7	7	5	19	59
East Boston Health Unit	—	—	—	—	9
Hyde Park Municipal Building	7	5	2	14	28
Curtis Hall, Jamaica Plain	5	5	5	15	18
41 North Margin street	—	—	—	—	35
Roslindale Municipal Building	—	—	1	1	25
Children's Hospital	5	6	2	13	10
1049 Columbus avenue	2	2	3	7	67
Vine Street Municipal Building	2	2	11	15	69
133 Dorchester street, South Boston	—	—	—	—	34
122 Tyler street	8	9	4	21	7
Shawmut Avenue Municipal Building	1	2	2	5	11
57 East Concord street	2	1	3	6	5
17 Blossom street	8	2	2	12	30
Totals	83	69	83	235	601

DENTAL ACTIVITIES AT HEALTH UNITS.

JUNE, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	478	411	553	358	587	2,387
Number of treatments by dentists	945	560	695	682	731	3,613
Number of treatments by hygienist	70	84	110	21	102	387

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

JUNE, 1929.

BOSTON DISPENSARY:
- Calls by district physician 154

BOSTON LYING-IN HOSPITAL:
- Number prenatal clinics 19
- Total attendance 229
- New cases 17

COMMUNITY HEALTH ASSOCIATION:
- Homes visited 8,916
- Cases referred 444
- Diseases reported 35
- Number of meetings of mothers' club 17
- Attendance 189

STATE DEPARTMENT OF MENTAL DISEASE:
- Number of clinics 4
- Attendance 35
- New cases 16

CHILDREN'S HOSPITAL:
- Number of clinics 8
- Attendance 70
- New cases 1

BOSTON HEALTH DEPARTMENT:
- Refraction Service:
  - Number of refractions 47
  - Glasses prescribed 16
  - New cases 8
- Nose and Throat Service:
  - Number of clinics 6
  - Attendance 352
- Number of meetings of mothers' club 3
- Attendance 46

NURSING SERVICE.

HOMES VISITED		15,464
CHILD HYGIENE:		
Visits to new cases	1,604	
Vsits to old cases	9,003	
Total		*10,807
COMMUNICABLE DISEASES:		
Visits to new cases	997	
Visits to old cases	1,920	
Total		†2,917
TUBERCULOSIS:		
Visits to new cases	224	
Visits to old cases	4,208	
Total		‡4,432
MISCELLANEOUS:		
Infant death investigations	73	
Maternal death investigations	6	
Patients accompanied to hospital	14	
Visits to day nurseries	24	
Visits to parochial schools	285	
Special visits	5	
Total		407
Total number of visits		18,363

	Hrs.	Min.
Hours at station by nurses	3,728	35
Hours at baby and P. S. conferences	1,632	5
Hours at tuberculosis clinics	785	35
Total number of hours	6,146	15

* Includes 143 wrong addresses; 1,021 not seen; a total of 1,164 absent visits.

† Includes 31 wrong addresses; 89 not seen; a total of 120 absent visits; 122 ophthalmia visits were also made.

‡ Includes 42 wrong addresses; 445 not seen; a total of 487 absent visits. 1,933 positive cases; 1,417 contact cases and 614 suspect cases were included.

Most persons who contract pneumonia have had colds.

Colds are never to be neglected. Their proper care should include the avoidance of crowds where people may be scattering pneumonia germs.

VITAL STATISTICS, JUNE, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JUNE, 1929, WITH COMPARATIVE FIGURES FOR JUNE, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	806	915	—109	12.01	13.74	—1.73
Nonresidents deducted	622	718	—96	9.27	10.78	—1.51
By Age:						
Under one year	90	128	—38	1.34	1.92	—.58
One year to four years, inclusive	30	51	—21	.45	.76	—.31
Sixty years and over	339	351	—12	5.05	5.27	—.22
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	38	42	—4	.57	.63	—.06
Arteriosclerosis	28	20	+8	.42	.30	+.12
Heart disease	146	169	—23	2.17	2.54	—.37
Nephritis, chronic	51	47	+4	.76	.70	+.06
Infant and Maternal Mortality:						
a. Total registered live births*	1,222	1,249	—27	18.21	18.75	—.54
b. Registered stillbirths	44	34	+10	.65	.51	+.14
Stillbirths per 1,000 births and stillbirths †	—	—	—	34.75	26.50	+8.25
c. Deaths of mothers from causes incident to childbirth	7	10	—3	.10	.15	—.05
d. Deaths of mothers per 1,000 births and stillbirths †	—	—	—	5.53	7.79	—2.26
Deaths of children in first year of life	90	128	—38	1.34	1.92	—.58
Deaths in first year per 1,000 live births†,	—	—	—	73.65	102.48	—28.83
Violence:						
Accidents	59	51	+,	.88	.76	+.12
Homicides	1	3	—2	.015	.04	—.025
Suicides	9	8	+1	.13	.12	+.01
Miscellaneous:						
Alcoholism, acute or chronic	14	10	+4	.21	.15	+.06
Broncho-pneumonia	37	63	—26	.55	.94	—.39
Cancer	84	96	—12	1.25	1.44	—.19
Cirrhosis of the liver	7	7	—	.10	.10	—
Diabetes mellitus	17	10	+7	.25	.15	+.10
Diarrheal diseases, children under two years of age	12	14	—2	.18	.21	—.03

* Figures for live births subject to increase.

† Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	1	1	—	.015	.015	—
Deaths.	—	1	—1	—	.015	+.015
Cerebrospinal meningitis.....Cases..	8	3	+5	.12	.04	+.08
Deaths.	3	2	+1	.04	.03	+.01
Diphtheria.....Cases..	69	85	—16	1.03	1.28	—.25
Deaths.	—	4	—4	—	.06	—.06
Influenza.....Cases..	2	14	—12	.03	.21	—.18
Deaths.	2	3	—1	.03	.04	—.01
Measles.....Cases..	178	205	—27	2.65	3.08	—.43
Deaths.	—	4	—4	—	.06	—.06
Pneumonia (lobar).....Cases..	81	107	—26	1.21	1.61	—.40
Deaths.	22	41	—19	.33	.61	—.28
Scarlet fever.....Cases..	167	240	—73	2.49	3.60	—1.11
Deaths.	2	3	—1	.03	.04	—.01
Tuberculosis (pulmonary).....Cases..	124	129	—5	1.85	1.94	—.09
Deaths.	41	48	—7	.61	.72	—.11
Tuberculosis (other forms).....Cases..	35	43	—8	.52	.64	—.12
Deaths.	5	10	—5	.07	.15	—.08
Typhoid fever.....Cases..	4	6	—2	.06	.09	—.03
Deaths.	—	—	—	—	—	—
Whooping cough.....Cases..	153	115	+38	2.28	1.73	+.55
Deaths.	2	6	—4	.03	.09	—.06

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

CITY OF BOSTON PRINTING DEPARTMENT.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

VOL. 18. BOSTON, AUGUST, 1929. NO. 8

THE CERTIFIED MILK SITUATION.

I have been asked to tell you something about the certified milk situation, but although this is a serious subject, I have never been able to convince myself that the cow is a serious animal. Indeed, it has always seemed to me that some are rather inclined to have a sense of humor. Now, you can take a lot of cows, and currycomb them, brush them, scrub, wash and dry them, and have them in a cleanly condition that is a delight to the eye, and you can then say to a cow, "Now, Susie, be a nice girl and don't daub yourself all up again before I can get a chance to milk you," but will she mind your instructions? It is axiomatic that you cannot talk sense or anything else into a cow, and before you can milk your nice, clean cows, there will always be some cows make themselves dirty again. At such times it has always seemed to me as though the cow was giving man the laugh at his efforts to control natural forces to his own ends. So, at the beginning, it is well to remind ourselves that even under the best of conditions, the cow is a dirty animal by nature, and that man's fight to make clean milk is a fight to control sources of filth.

Firstly, I wish to speak about raw milk generally.

We often hear that milk is a perfect food. It is a perfect food for human beings, animals, and for disease-producing organisms, as a result of which milk may be a perfect medium by means

of which diseases may be distributed to those who drink milk. This is one reason why Boston spends $45,000 yearly trying to safeguard the milk supply of its citizens.

Nearly every year attention is drawn anew to the dangers of raw milk. Last year the epidemic of septic sore throat at Lee; this year the scarlet fever epidemic at Plymouth, and a sore throat epidemic at Charlton.

And, now, in addition to the diseases distributed by milk, which we have known too often and fear so much, new diseases are looming on the horizon. Undulant fever, a few years ago a name of only pedagogic interest to us, now must receive our serious attention. Europe has thousands of cases; America has a thousand cases, several cases have been reported recently in Massachusetts. One reason why we do not hear more about undulant fever is that few physicians are able to recognize it. One of the cases of undulant fever reported in Massachusetts recently first passed through the hands of two eminent pediatricians who failed to recognize it. Another reason for not hearing more about undulant fever is that many physicians who are on the lookout for it are timid about definitely calling it undulant fever unless they can isolate the organism, and it is unfortunately true that in many cases the organisms are concentrated in the liver and spleen, and cannot be found in an accessible place.

Now, a case of undulant fever is a pitiful one, because it may run for years, and there is so little that a physician can do for his patient beyond trying rather unsuccessfully to make the patient more confortable.

Doctor Meyer, of the University of California, an authority on this disease, states that in at least one case known to him a certain certified milk is under grave suspicion.

At any rate, we know that even in herds producing certified milk, approximately 30 per cent of the cattle have infectious abortion, and Doctor Way of New York says that a positive reaction is obtained in about 20 per cent of the milk from cows having infectious abortion. Now, just consider for a moment what this means. All raw, if mixed, milk, and excepting only milk drawn from herds free from infectious abortion, contains the organism of infectious abortion, and the consumer of raw milk relies on dilution, that is, dosage, and resistivity, to protect him from the disease.

Doctor Meyer also reports that cows are susceptible to tularaemia, and tularaemia is spreading all over the United States. It was reported in Rhode Island a few weeks ago.

In view of all this, we may well ask ourselves with respect to milk-borne disease, what next?

It is in recognition of these facts that we turn to the pasteurization of our milk supplies.

Now, certified milk is raw milk, and differs from other raw milk only because of the care that is thrown around the production of it. In our Commonwealth, certified milk is produced under the supervision of a Medical Milk Commission, and the methods of production, which, however, shall be approved by the Department of Public Health, shall not fall below the standards of purity and quality for certified milk as fixed by the American Association of Medical Milk Commissions.

Let us examine briefly some of the methods and standards fixed by the American Association of Medical Milk Commissions. With regard to the eradication of tuberculosis they say: "It is recommended that the control and eradication of tuberculosis be under the accredited plan." Note the words "control" and "recommended."

With regard to infectious abortion they say: "It is recommended that certified milk producers begin abortion control work." Again the words "recommended" and "control."

With regard to septic sore throat they say: "It is recommended that samples of certified milk be examined at frequent intervals for streptococcus epidemicus."

The use of the words "control" and "recommend" is equivalent to an admission that there is a crying need that the work afore said be done, that certified milk is not safe unless it is done, and yet the use of these words gives the producer a choice so that he may or may not do the work indicated, and if he does not do it he will still be producing certified milk which does not fall below the standards of purity and quality for certified milk as fixed by the American Association of Medical Milk Commissions. It is a result of this unfortunate laxity, or misguided policy of the American Association of Medical Milk Commissions, whichever you choose to call it, that we find some producers of certified milk trying to serve two masters, and with the usual result. One master is the breeding of pure-bred cattle for purpose of sale. The other master is the production of certified milk. Now, these two interests are not always identical, and too often in such cases the heart of the owner is in the pure-bred cattle business, and the certified milk is only a by-product. Now, this is all wrong. If anything goes wrong with the pure-bred cattle end of the business only dollars are lost, but if anything goes wrong with the certified milk, it may mean that lives are lost, and after a life is lost all the money on earth cannot buy it back to existence again.

Now, I hope that you are not thinking that this picture is all a gloomy one, but in order to paint the picture, I must first paint the background. Fortunately there are a few, too few, producers of certified milk — and among these the Walker-Gordon Laboratory Company stands out conspicuously — who view the production of certified milk, in a large way, as an industry. Such producers bring to the production of certified milk money, science, and ideals. It is with such producers as these that certified milk reaches most nearly the pure, clean and safe milk that it is intended to be. It is with them that the hope for the future of certified milk lies. With such producers as these, the policy is: "Whatever can be done to make certified milk better, that we will do."

Doctor Meyer, past president of the American Association of Medical Milk Commissions, says infectious abortion can be eradicated without too much difficulty, and a cow free from infectious abortion produces one to two quarts of milk per day more than the same cow with infectious abortion. He says that tuberculosis can be eradicated, and here, also, there is a return in increased production. Certified milk can be produced free from streptococcus epidemicus.

To make certified milk safe requires scientific herd supervision and scientific laboratory control; supervision and control, not casual, but constant. It means that the producer of certified milk must spend money. It is the small producer, financially unable to surround his product with all the safeguards, who is holding back the methods and standards of the American Association of Medical Milk Commissions. The methods and standards are cut to fit the needs of the small producer and he is responsible for the suspicion under which certified milk labors today.

Certified milk produced by different farms may each be labelled "Certified Milk — Produced Under the Supervision of a Medical Milk Commission." This label implies that the Medical Milk Commission certifies that the milk under its label is pure, clean, and safe, and the consumer thinks that all milks appearing under this label are equally pure, clean and safe. Bearing in mind that only a few producers — at the top of the scale — have herds under the supervision of a full-time veterinarian; herds free from tuberculosis, and about to be free from infectious abortion; that their milk is under rigid laboratory control both of the health of employees and of the milk itself; and contrasting with milk so produced the character of the milk produced under more or less incomplete herd supervision and laboratory control, milk that is produced from cows not free from tuberculosis and having infectious abortion,

and that the milk from about 20 per cent of the cows having infectious abortion gives a positive reaction, it is apparent that certified milks produced by different sources are by no means equally pure, clean and safe.

Health officials, representing the consumer, demand that all milk sold under the label of certified milk be actually pure, clean and safe. We demand the eradication of infectious abortion if this milk is to be sold raw. We demand the eradication of tuberculosis from such herds as are to produce certified milk. We demand adequate laboratory control. We demand that the health of employees be kept under adequate medical supervision.

In 1923 the Department of Public Health was entrusted by the Legislature with the approval of conditions of production of certified milk. It is time now that the Department of Public Health adopt regulations to the effect that all producers of certified milk shall eradicate infectious abortion from their herds by some future date, say January 1, 1931, and shall thereafter keep their herds free from said disease (a step already taken by the Medical Milk Commission of Boston, Inc.). Also to the effect that all producers of certified milk shall establish a system of laboratory examination of milk to the end that they may warrant their product to be free from streptococcus epidemicus.

Just a word about certified milk — pasteurized. The Medical Milk Commission of Boston, Inc., with the approval of the Milk Inspector and the Health Commissioner of Boston, and with the approval of the Health Commissioner of the Commonwealth, notified its producers that they might, if they wished, bottle, seal and pasteurize certified milk at the farm under the supervision of the Medical Milk Commission, and might label it "Certified Milk — Pasteurized." This has been done by two producers to part of their output. The standards of such milk before pasteurization are the same as for certified milk to be sold raw. You may be interested to know that the live bacteria content of such milk averages less than 200 per cubic centimeter and many plates show no growth in a 1–50 dilution. This "certified milk — pasteurized" is certified milk which has received the additional safeguard afforded by pasteurization. It represents the safest milk obtainable, as well as the cleanest, and deserves increased popularity.

Boston, on September 12, 1928, promulgated regulations requiring the pasteurization of all milk excepting only milk certified by the Medical Milk Commission of Boston, Inc., which commission also provides a supply of "certified milk — pasteurized" for those who want it. In October, 1928, Nashua, N. H., excluded all raw milk,

including certified. Albany, N. Y., recently excluded all raw milk, including certified. Detroit, Mich., seems about to follow; likewise, Birmingham, Ala.

I think that it is important that the door be kept open for certified milk raw in order to give the producers an ample chance to demonstrate whether or not they can produce milk that will in *fact* be pure, clean and safe, and also be *equally* pure, clean and safe, in complete fulfillment of the trust implied by their label "Certified Milk — Produced Under the Supervision of a Medical Milk Commission." If they cannot or will not make good, then their only alternative, as I see it now, is pasteurization as a final safeguard.

I think that after you have heard Doctor Hardenberg tell you about the laboratory control practised by the Walker-Gordon Laboratory Company present and planned for the future, and after you have heard Mr. Jeffers, president of the Walker-Gordon Laboratory Company, tell you about his plans for producing certified milk on an operating-room basis, and perhaps give you a glimpse through his eyes of what certified milk can be in the future, you will understand why we in Boston are holding open the door for certified milk, but for only one kind of certified milk,— and that is the highest grade of certified milk that can be produced.

Paper by Frank E. Mott, Milk Inspector of Boston at the regular meeting of the Massachusetts Association of Boards of Health, July 25, 1929, at Walker-Gordon Farm.

FOOD INSPECTION COMMENTS.

It has been found during the month that various restaurants specializing in boiled live lobsters are in the habit of picking out from their stock for boiling those lobsters which seem nearly dead. The proprietors in such restaurants have been warned to use only vigorous lobsters for boiling and serving.

There has been at this season an extraordinary number of complaints of worm infestation in various articles of food; for example, peaches, green corn and nut-filled candies, and 250 pounds of the latter article were condemned. Corn is arriving in the market badly infested with corn worms and European borer. This condition presents about the same phase as the peach shipments, inspectors reporting that the presence of worms in peaches from Georgia and Alberta are running in some lots up to 80 per cent. A serious question often arises as to when conditions demands condemnation. In some instances the infestation is so slight that trimming will permit a generous salvage. However, when the infestation is so grave as to cause large portions of the fruit to be unfit, no action other than condemnation is possible.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Cirrhosis of the Liver.

The mortality from cirrhosis of the liver is quite a formidable item in the annual death returns. In the United States during 1926, the number of deaths from cirrhosis of the liver was 7,591, of which 452 were ascribed to alcoholic effects. But this designation is of extremely doubtful statistical value although it goes without saying that a large proportion of the deaths from cirrhosis of the liver are possibly uncomplicated by alcoholic over-indulgence. Every authority on the subject concedes the great influence of excessive alcoholism so that for practical purposes, all deaths from cirrhosis of the liver are frequently applied as an index of alcoholic indulgence. The mortality returns do not differentiate between atrophic and hypertrophic cirrhosis of the liver but for practical purposes the causative factors in both forms of the disease are possibly the same. Dr. Leonard G. Rowntree of the Mayo Clinic has given a more precise clinical classification of cirrhosis of the liver but this also is inapplicable to mortality returns. It would unquestionably aid materially in the scientific study of the causative factors of cirrhosis of the liver if the mortality could be more precisely co-ordinated to a clinical differentiation.

Doctor Rowntree in a very able contribution on the "Considerations in Cirrhosis of the Liver" contributed to the Division of Medicine, Mayo Clinic, published in the "Journal of the American Medical Association," November 5, 1927, enters to a considerable extent into the statistical aspects of the disease observing that, "As alcoholic cirrhosis represents the portal or Laennec form of cirrhosis and is not unfamiliar to the profession, it would seem that the etiologic relationship of alcohol to this disease was established. The majority of physicians accept it, but, on the other hand, many pathologists reject or question it. Certainly alcohol is not the only agent that causes the Laennec type of cirrhosis. Even in alcoholic subjects the pathologists postulate associated etiologic factors, copper (Mallory), potassium sulphate or infection. The clinical manifestations, the gross pathologic picture and, in the minds of many pathologists, even the microscopic picture is encountered in cases in which alcohol can be excluded as a cause. I have seen cases which I was obliged to consider as primary portal cirrhosis of unknown

origin. I have also seen at necropsy instances of the pure Laennec type of cirrhosis occurring in cases of syphilis for which vigorous antisyphilitic treatment has been employed during life; at necropsy the pathologist has not been able to demonstrate any evidence of the presence of syphilitic lesions. In most cases of this kind there is also an alcoholic history, and in such it may prove difficult to determine whether the disease should be ascribed to alcohol or to syphilis."

He calls attention to the declining rate in the mortality from cirrhosis of the liver from 12.2 per 100,000 in 1917 to 7.6 in 1920. The course of the disease during recent years has been as follows:

MORTALITY FROM CIRRHOSIS OF THE LIVER — 1912–26 — PER 100,000.

Year.	Deaths.	Alcoholic. Cirrhosis Only.	Rate.	Year.	Deaths.	Alcoholic. Cirrhosis Only.	Rate.
1916	8,799	—	12.3	1922	7,027	339	7.2
1917	8,569	—	11.4	1923	7,027	368	7.2
1918	7,817	—	9.6	1924	7,344	421	7.8
1919	6,704	—	7.9	1925	7,549	480	7.3
1920	6,241	—	7.1	1926	7,591	452	7.2
1921	6,977	218	7.5	1927	8,098	523	7.5

According to this table the death rate from cirrhosis of the liver since 1920 has remained about the same. During the earlier years, the rate was 14.3 during 1906–10 and 13.2 during 1911–19. It declined previous to prohibition to a rate of 11.4 in 1917 and 9.6 in 1918. Its decline was unquestionably the result of voluntary temperance which was becoming quite general and, of course, the effect of prohibition in certain states which had adopted the principle before it became of universal application throughout the country.

Doctor Rowntree in his paper shows a practically uniform incidence of cases from 1910–26 in the experiene of the Mayo Clinic, a sudden decline for the Cook County Hospital in 1917, and a fairly normal rate in 1920, while for the Montreal General Hospital he shows a gradual decline between 1910 and 1921, but a perceptible rise in 1922–26. With reference to our national statistics he observes:

"In the United States alcoholism and cirrhosis are both highest for the urban population and approximately 50 per cent lower in the rural districts. Subsequent to 1917, which represents the beginning of the war and the passage of the Eighteenth Amendment, a striking decrease was observed in alcoholism and in cirrhosis of the liver, the minimal figures being attained in 1920. The incidence of death from alcoholism has been increasing steadily since 1920, that for cirrhosis remaining almost stationary. The death rate for alcoholism in 1920 was only approximately 25 per cent of that in 1916. Deaths from cirrhosis of the liver in the urban population were reduced by 50 per cent. Again the influence of the war as

well as of control of alcohol must enter into consideration. In England and Wales, the death rate from cirrhosis of the liver showed a sharp decline after 1914, and reached its minimum in 1919, decreasing more than 50 per cent. Deaths from alcoholic cirrhosis decreased almost two thirds."

Specifically the death rate of cirrhosis of the liver in England and Wales declined from 8.9 in 1916 to 6.9 in 1917, reaching a minimum point of 4.3 in 1919. Subsequent to that year, the rate increased to a maximum of 5.1 in 1921, declining slowly during the next three years, and rising to 4.8 in 1926 and 4.7 in 1927. For England in 1926, the rate for males was 6.5 per 100,000 and for females, 3.2. Out of 1,865 deaths from cirrhosis of the liver in 1926, 132 were specifically ascribed to alcohol. In Montreal for 1927, there were 58 deaths from cirrhosis of the liver of which only two were ascribed to alcohol. The lower rate from cirrhosis of the liver in England and Wales may possibly, of course, be attributed to the superior character of alcoholic beverages, of which a large proportion in this country at the present time unquestionably is more or less adulterated. But such a difference would not explain the much higher incidence of cirrhosis of the liver in this country previous to prohibition when the rate for 1916 was 12.3 for the United States and only 8.9 for England and Wales. Doctor Rowntree amplifies his American statistics by charts for different countries, particularly Japan, Chile, South Africa, New Zealand, Sweden, Norway, and Italy, observing that,

"From this it would appear that the death rate for each 100,000 of the population from cirrhosis is highest for Italy and lowest for Norway, which had prohibition and was a neutral country. Attention might also be called to the marked decrease in the death rate in Switzerland from 1916 to 1921, although Switzerland was a neutral country and, so far as ascertainable, had no new legislation in regard to the control of alcohol."

Wine drinking is generally considered a contributory cause in cirrhosis of the liver in wine-drinking countries. This has been emphasized by Held, who, in his treatise on Differential Diagnosis, remarks that "The excessive use of liquor is, no doubt, a great factor in diagnosis. It complicates atrophic cirrhosis of the liver, not only in whiskey drinking but also in wine drinking, particularly in the drinking of Rhine wine." This would probably explain the higher incidence of cirrhosis of the liver in Italy.

Cirrhosis of the liver is largely a disease of advanced adult life. It occurs, however, even in early infancy, there having been during 1925, 44 deaths at ages under 5; 16 deaths at ages 5 to 9; 26 deaths at ages 10 to 14, and 28 deaths at ages 15 to 19. After

this age the mortality increases rapidly to 44 deaths at ages 21 to 24 and 84 deaths at ages 25 to 29. At ages 30 and over the deaths are given in detail in the table following:

MORTALITY FROM CIRRHOSIS OF THE LIVER, UNITED STATES REGISTRATION STATES, 1925.

	Deaths.		Deaths.
Ages under 30	242	65–74	1,773
30–34	159	75 and over	1,100
35–44	829	Unknown	10
45–54	1,497	Total	7,549
55–64	1,939		

In connection with the foregoing some observations might not be out of place with regard to the mortality from acute yellow atrophy of the liver which is also often associated with alcohol. The death rate from this disease has increased from 0.4 per 100,000 in 1916 to 0.5 in 1926. The mortality is small, there having been in 1926 only 515 deaths. The deaths since 1916 are given in the table below:

MORTALITY FROM ACUTE YELLOW ATROPHY OF THE LIVER, UNITED STATES REGISTRATION AREA, 1916–1926.

	Deaths.	Rate.		Deaths.	Rate.
1916	306	0.4	1922	321	0.4
1917	295	0.4	1923	368	0.4
1918	307	0.4	1924	421	0.4
1919	308	0.4	1925	469	0.5
1920	341	0.4	1926	515	0.5
1921	372	0.4	1927	486	0.4

The outstanding aspect of this disease is the higher incidence among females, which seems to be characteristic of its occurence in other countries as well as in the United States. In 1925, in the registration states, there were 180 deaths from the disease among males and 270 deaths among females. In England and Wales during 1926 there were 83 deaths from acute yellow atrophy of the liver, of which 63 were deaths of females.

Without enlarging upon the controversial aspects of the incidence of this disease in relation to prohibition and the control of the liquor traffic, it is only necessary to point out that since 1922 deaths from all forms of cirrhosis of the liver have increased from 7,027 to 8,098, or from a rate of 7.2 to 7.5, while deaths from alcoholic cirrhosis have increased from 339 to 523.

PROTECTION AGAINST MOTHS.

All three forms of moths are common in the United States, and are a constant source of trouble to the housewife. In the late spring, when it is time to put the winter clothing away for the summer, or in the fall when the summer clothing is stored for the winter, the garments should be thoroughly brushed and examined for these pests. Strings of silk, channels of the tube moth, and cocoons are easily identified and should be thoroughly brushed away.

All garments should next be thoroughly cleaned, grease spots removed with a safe cleaner, and placed in the sunlight for as long a time as possible, six or eight hours at least. If gasolene or benzene is used, it should be used out of doors and with great precaution. Clothes should then be wrapped carefully in stout paper or packed in cardboard boxes, and the crack between the cover of the box and the lid tightly sealed by pasting over it a strip of paper. Very suitable moth-proof bags can be obtained at a relatively small expense. Probably the best method to prevent moths is to have the clothing thoroughly dry cleaned before storage. Odorless benzene is used for this purpose by the cleaners, and the benzene dissolves the egg covering of the moth and destroys the larva. Clothing dry-cleaned before storage will very seldom be troubled by moths. Moth balls (naphthalene), cedar chests, even camphor balls, are of some value. A good cedar chest is effective if it closes tightly and does not allow the moths to get to the clothing. One and one half ounces of gum camphor, dissolved in a pint of denatured alcohol and sprayed over the clothing is an excellent means of preventing moths. Dichlorbenzene is also used extensively to discourage moths and is quite efficient. It may be sprayed, if it is in liquid form or the crystals scattered over the clothing.

When upholstering of furniture and similar material is infested with moths, the upholstering should be loosened from the framework and the gum camphor and alcohol spray or the dichlorbenzene treatment used.

Expensive furs should be placed in cold storage, as the low temperature prevents development of the eggs. Carpets, rugs and tapestries can be easily protected from moths if they are frequently swept or brushed and exposed to the light.— (From "Chicago's Health.")

MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH MEETING.

The summer meeting of the Massachusetts Association of Boards of Health was held at the Walker-Gordon Farm, Charles River, Mass., on Thursday afternoon, July 25. The members of the association and their friends were guests of the company and the one hundred that were in attendance enjoyed an excellent buffet lunch, served by the company, and interesting papers on the milk situation. The program consisted of a paper by Frank E. Mott, Milk Inspector of Boston, on "The Certified Milk Situation," which was followed by a discussion, after which Mr. Henry W. Jeffers, president of the company, spoke extemporaneously and at length on the business and sanitary phase of the business. Dr. J. G.

Hardenberg of the same company read an interesting paper on "Methods of Control and Production of Certified Milk." There was an inspection of the plant, including the cattle, equipment, utensils, methods and facilities and handling, pasteurization and shipping milk. It was voted that the thanks of the association be given the Walker-Gordon Company for its hospitality and cooperation and in its endeavors to assist in improving the milk situation in the community.

SUMMARY OF WORK, JULY, 1929.

ADMINISTRATION DIVISION.

Legal notices	2	Personnel:	
License applications refused	5	Leaves of absence	2
Settlements:		Transfer	1
Total cases	167	Temporary appointment	1
Notices	119	Resignations	2
Bills	48	Permanent appointments	4
Conditional stable permits	1	Prosecutions approved	6
Lying--in hospital approved	1		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	879	Ice cream dealers	304
Denatured alcohol	9	Beverage	42
Hen licenses	75	Manure	1
Manicure-massage granted	345	Milk	200
Ice cream manufacturers	7	Pedlers	112
Ice cream manufacturers refused	3	Garbage transportations	2

MEDICAL DIVISION.

Reported cases	1,158	Visits:	
Nonresidents	60	By V. D. investigator	200
Deaths investigated	25	By medical inspectors to cases of communicable disease	418
Vaccinations	5		

BACTERIOLOGICAL LABORATORY DIVISION.

Diptheria	736
Tuberculosis	337
Typhoid	101
Gonorrhea	873
Gonorrheal ophthalmia	46
Syphilis	1,162
Other examinations *	307
Bacteriological examinations of milk	675
Bacteriological examinations of ice cream	101
Dark field	8
Genito urinary T. B.	21
Malaria	1

* Urines, 258; Vincent's angina, 5; paratyphoids, 8; fæces for entamœba histolytica, 1; smears for organisms, 1; chicken liver for organisms, 1; urine sediment for T. B., 1; urine for Eberthella typhi, 16; fæces for Eberthella typhi, 16.

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores during July, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as certified milk, or pasteurized as certified milk — pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.60	4.00	16,000
Antetomasso, Peter	12.77	4.13	13,500
Bancroft, Hugh *	12.20	4.30	4,000
Brandley, F. J. & P. J.	12.23	3.53	100
Casey, James	12.14	3.60	52,500
Cashin, James F., & Co.	12.33	3.82	7,400
Chapin, George L.	12.45	3.95	2,500
Clark, Levi	12.25	3.83	23,000
Corkery, John J.	12.53	4.00	17,500
Cosgrove, Martin S.	12.38	3.73	6,600
Cummings, Francis S.	12.29	3.82	10,500
Daley, John	12.09	3.63	8,000
Dean, Louis W.*	13.36	4.20	14,000
Deerfoot Farms Company	12.36	3.85	13,500
Denehy, Timothy	12.22	3.45	10,500
Driscoll, William B., Company	12.47	3.86	11,500
Edgerly, Frank S.	12.52	4.00	9,000
Elm Spring Farm Company	12.14	3.75	25,500
Ferguson, Malcolm D.	12.36	3.83	12,500
Garfield, Mason *	14.24	5.10	2,400
Garvin, Charles E.	14.89	5.58	13,500
Groux, J. E. & H. J.	12.47	3.83	4,000

* Milk from tuberculin tested cows.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Griffin, Joseph L.	12.68	3.94	9,500
Gushee, Chester W.	12.48	3.83	14,500
Hampden Creamery Company	12.66	3.79	11,000
Herlihy Brothers, Inc.	12.16	3.73	68,500
Hickey, James B.	12.00	3.63	8,500
Hoden, John E.	12.50	3.97	14,000
Hood, H. P., & Sons, Inc.	12.31	3.75	15,500
Hutchinson, Frank T.	11.96	3.70	10,500
Jones, William T., Company	12.49	3.95	6,300
Kendall Brothers	12.06	3.50	8,700
Kingston Brothers	12.27	3.60	10,500
Knapp, George J.	12.31	3.83	19,500
Lang Brothers	12.25	3.88	10,500
Larsson, Charles	12.21	3.68	8,000
Lyndonville Creamery Association	12.47	4.17	5,500
Manning, Harriet	12.24	3.60	21,000
McAdams, J. F. & Brothers, Inc.	12.66	3.96	11,500
McKernan, James	12.52	3.93	37,500
Munchback, Albert W.	12.49	3.75	39,500
New England Creamery Products Company *	12.78	4.09	13,500
Robinson, A. J.	13.10	4.30	14,000
Schuster, Adam	12.45	3.83	10,500
Seven Oaks	12.33	3.85	6,200
Shick, Jacob	12.47	3.72	5,500
Somerset Farms Creamery Company	12.58	4.05	6,050
Sterling Farms Milk Company	12.23	3.65	12,000
Stone, H. L.	12.15	3.63	14,000
Stuart, W. E., Company	12.49	3.88	8,000
Turner Centre System	12.45	3.85	7,050
United Farmers Co-operative Creamery Company	12.55	4.04	37,500
Walker-Gordon Laboratory Company *	12.64	4.20	200
Weiler, E., & Sons	12.58	4.12	27,000
Westwood Farms Milk Company	12.24	3.75	12,000
White Brothers	12.43	3.78	15,000
Whiting Milk Companies	12.29	3.80	25,500
Whittemore, W. D.	12.64	4.05	5,300
Williams, Edward C.	12.83	4.28	12,000
Wiswall, Granville A.	12.06	3.60	20,000
Woodland, Charles L.	12.50	4.00	16,000

* Milk from tuberculin tested cows.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids.	Fat.	Bacteria in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood H. P., & Sons, Inc...	12.29	3.82	11,500
Brown, M., & Sons.....	Whiting Milk Companies...	12.35	3.88	19,500
Cloverdale, The, Company.....	Turner Centre System.....	12.45	3.85	800
Economy Grocery Stores Corporation.	Whiting Milk Companies...	12.23	3.83	19,500
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	12.73	4.02	9,500
Morgan Brothers Company *...	New England Creamery Products Company.	12.64	3.98	31,500
Winer M., Company.....	Winer M., Company.....	12.70	4.13	31,000

* Milk from tuberculin tested cows.

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Antetomasso, Peter.....	12.85	4.33	9,000
Cosgrove, Martin S.....	13.47	4.65	21,500
Cummings, Francis S., Company.....	12.80	4.18	800
Dean, Louis W.....	13.24	4.25	18,000
Elm Spring Farm Company.....	12.94	4.25	10,000
Griffin, Joseph L.....	13.70	4.85	3,500
Herlihy Brothers, Inc.....	12.50	4.03	5,000
Hood, H. P., & Sons, Inc.....	12.52	4.20	6,300
Jones, W. T., Company.....	12.90	4.15	8,000
McAdams, J. F., & Brothers, Inc.....	13.02	4.40	8,000
Robinson, A. J.....	13.12	4.30	17,000
Seven Oaks Dairy Company.....	12.40	3.80	300
Sterling Farms Milk Company.....	12.66	4.13	10,500
Turner Centre System.....	12.98	4.42	6,500
Weiler, E., & Sons.....	12.70	4.20	42,000
White Brothers.....	13.05	4.50	6,700
Whiting Milk Companies.....	12.51	4.12	1,400
Woodland, Charles L.....	12.78	4.18	14,000

CERTIFIED MILK.

Raw milk, produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.66	4.20	10,000
Hood, H. P., & Sons, Inc.	Own	13.75	4.43	1,040
New England Creamery Products Company.	Bellows Stock Farm	12.38	3.70	3,000
Walker-Gordon Laboratory Company.	Own	12.28	3.90	1,000

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.07	3.53	100
Hood, H. P., & Sons, Inc.	Own	13.22	4.30	200

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:

Milk from wagons	392
Milk from stores	895
Milk brought by citizens	8
Vinegar	29
Water	143
Ice cream	2
Milk bottles	10
Milk bottle caps	5
Miscellaneous examinations	2
Samples referred to Bacteriological Laboratory for examination:	
Ice cream	101
Milk	675
Court cases	12
Fines	$170

ANTITUBERCULOSIS VACCINATION IN ITALY.

The National Children's Bureau of Italy plans to introduce in ten large cities optional antituberculosis vaccination of new-born infants.

According to the plan, the registrar of vital statistics in each city will report the births every day to the pediatric clinic of that city. The clinic will then send to the family a circular, with a reply card attached, explaining in simple language the reasons in favor of antituberculosis vaccination in cases where the child was exposed to contagion. If the parents agree, the child is given the vaccine. From that time on the child will be under the supervision of the clinic as long as this is considered necessary for its health.

The purpose of the work is to reduce the incidence of tuberculosis among infants and to ascertain more about the nature of the vaccine.

DAIRY DIVISION.

Total services	1,901	Total cattle inspected	12,772
Dairies inspected	848	Inspections of milk plants and licensed dealers	194
Scoring above 50 *	611	Bacteriological examinations	597
Scoring below	237	Country creamery inspections	8
With milk rooms	655	Sediment tests	245
Without milk rooms	193		
Inactive	8		

* Passable mark.

FOOD INSPECTION DIVISION.

JULY, 1929.

District inspections	2,457
Reinspections	417
Market inspections	2,400
Terminal inspections	551
Vehicle inspections *	4,575
Stand inspections	1,347
Complaints	57
Notices to abate	235
Court cases entered	2
Condemnations	4,107 pounds
Fines	$30
Samples taken	2
Pedler Service:	
Numbers assigned	138
Licenses certified	117
Vehicles approved	681
Licenses to remove bones	51

* This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market.

ABATTOIR DIVISION.

Cattle inspected	2,910	Parts condemned	815
Calves inspected	13,867	Animals condemned	54
Swine inspected	2,729	Total of meat condemnations (pounds)	18,294
Sheep inspected	169		

SANITARY DIVISION.

Original inspections	2,218	Complaints investigated	674
Causes for action found	1,737	Nuisances abated	1,781
Reinspections	6,124	Routine inspections	2,304
Legal notices served	163	Court cases authorized	2

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	19	172	127	299	29	22	51
East Boston	14	76	128	204	15	28	43
North End	14	25	47	72	9	15	24
West End	14	48	59	107	6	9	15
South Boston	14	79	102	181	21	14	35
Boston Dispensary	10	24	18	42	9	9	18
Brighton	10	25	18	43	4	5	9
Charlestown	8	14	25	39	5	1	6
Codman square	14	89	64	153	19	13	32
Hyde Park	8	36	39	75	4	4	8
Fields Corner	5	22	41	63	7	13	20
Totals	130	610	668	1,278	128	133	261

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	31	24	97	116
East Boston	29	7	18	58
North End	29	9	37	88
West End	14	9	—	—
South Boston	27	20	—	—
Boston Dispensary	10	3	—	—
Brighton	7	1	—	—*
Charlestown	6	4	—	—*
Codman square	18	13	—	—*
Hyde Park	1	2	—	—*
Fields Corner	17	6	—	—*
Totals	189	98	152	262

*No lamp treatments or X-ray given at these stations.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING JULY, 1929.

Classification.	Number.	Percentage.
After death	12	27.91
Seven days or less	2	4.65
Eight to fourteen days, inclusive	2	4.65
Fifteen to twenty-one days, inclusive	—	—
Twenty-two to thirty-one days, inclusive	1	2.33
Within First Month. (Total)	17	39.54
Within second month	5	11.62
Within third month	5	11.62
Within fourth month	1	2.33
Within fifth month	1	2.33
Within sixth month	2	4.65
Within seventh month	—	—
Within eighth month	1	2.33
Within ninth month	1	2.33
Within tenth month	1	2.33
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	34	79.08
Within second year	1	2.33
Within third year	1	2.33
More than three years	7	16.26
Grand totals	43	100.00

MONTHLY REPORT OF ADMISSIONS TO AND DISCHARGES FROM TUBERCULOSIS SANATORIUMS OF BOSTON CASES FOR THE MONTH OF JULY, 1929.

Public Sanatoriums.	Admitted.	Discharged.
Boston Sanatorium	32	25
North Reading State Sanatorium	4	3
Lakeville State Sanatorium	3	5
Rutland State Sanatorium	7	12
Westfield State Sanatorium	3	3
Totals	49	48

Private Sanatorium.	Admitted.	Discharged.
Doctor Lapham's Sanatorium	0	0
Plymouth County Sanatorium	5	6
Total	5	6

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, July, 1929.

Physical examinations	1,571
Toxin-antitoxin administrations	45
Vaccinations	154
Vaccination certificates issued	122
Day nursery visits	4

NUMBER OF CONFERENCES AND ATTENDANCE.

Station.	Number of Babies.	Number of Pre-school (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	215	33	248	33	4	37	5	50
31 Lincoln street, Brighton	49	5	54	7	—	7	3	18
Charlestown Municipal Building	421	11	432	37	—	37	10	43
Codman Square Library	440	79	519	69	9	78	10	52
Columbia Road Municipal Building	502	26	528	69	6	75	10	53
1 Arcadia street, Dorchester	438	50	488	48	—	48	8	61
East Boston Health Unit	211	43	354	65	1	66	8	44
Hyde Park Municipal Building	181	20	201	23	2	35	8	25
Curtis Hall, Jamaica Plain	228	31	259	38	10	48	5	52
41 North Margin street	190	46	236	34	1	35	8	30
Roslindale Municipal Building	274	80	324	42	1	43	5	71
Children's Hospital	139	16	155	25	3	28	8	31
1049 Columbus avenue	293	14	307	41	—	41	8	38
Vine Street Municipal Building	334	25	359	60	2	62	8	45
133 Dorchester street, South Boston	377	48	425	73	4	77	8	53
122 Tyler street	119	17	136	13	2	15	5	27
Shawmut Avenue Municipal Building	225	35	260	28	2	30	3	52
57 East Concord street	115	11	126	21	—	21	3	42
17 Blossom street	322	52	374	33	—	33	8	47
Totals	5,173	642	5,815	759	47	806	130	44

TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	1	3	1	5	29
31 Lincoln street, Brighton	—	—	—	—	4
Charlestown Municipal Building	—	—	1	1	49
Codman Square Library	7	9	8	24	50
Columbia Road Municipal Building	3	2	—	5	63
1 Arcadia street, Dorchester	9	5	1	15	62
East Boston Health Unit	—	—	—	—	4
Hyde Park Municipal Building	7	10	6	23	23
Curtis Hall, Jamaica Plain	—	1	1	2	22
41 North Margin street	2	1	2	5	4
Roslindale Municipal Building	2	2	3	7	36
Children's Hospital	5	4	4	13	13
1049 Columbus avenue	2	6	—	8	98
Vine Street Municipal Building	1	—	1	2	75
133 Dorchester street, South Boston	—	—	—	—	7
122 Tyler street	1	3	4	8	11
Shawmut Avenue Municipal Building	3	4	4	11	11
57 East Concord street	1	3	2	6	—
17 Blossom street	4	6	7	17	5
Totals	48	59	45	152	530

DENTAL ACTIVITIES AT HEALTH UNITS.

JULY, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	140	128	187	138	159	752
Number of treatments by dentists	277	150	190	157	185	959
Number of treatments by hygienist	27	25	3	27	29	111

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

JULY, 1929.

BOSTON DISPENSARY:
- Calls by district physician 156

BOSTON LYING-IN HOSPITAL:
- Number prenatal clinics 22
- Total attendance 240
- New cases 65

COMMUNITY HEALTH ASSOCIATION:
- Homes visited 9,132
- Cases referred 463
- Diseases reported 11
- Number of meetings of mothers' club 13
- Attendance 157

STATE DEPARTMENT OF MENTAL DISEASE:
- Number of clinics 4
- Attendance 31
- Number of clinics 7

CHILDREN'S HOSPITAL:
- Number of clinics 7
- Attendance 51
- New cases 0

BOSTON HEALTH DEPARTMENT:

Refraction Service:
- Number of refractions 48
- Glasses prescribed 21
- New cases 26

Nose and Throat Service:
- Number of clinics 0
- Attendance 0

Number of meetings of mothers' club 1
- Attendance 10

NURSING SERVICE.

Homes Visited		14,372
Child Hygiene:		
Visits to new cases	1,365	
Visits to old cases	8,325	
Total		*9,690
Communicable Diseases:		
Visits to new cases	645	
Visits to old cases	1,300	
Total		†1,945
Tuberculosis:		
Visits to new cases	223	
Visits to old cases	4,433	
Total		‡4,656
Miscellaneous:		
Infant death investigations	66	
Maternal death investigation	1	
Patients accompanied to hospital	1	
Visits to day nurseries	3	
Total		71
Total number of visits		16,362

	Hrs.	Min.
Hours at station by nurses	3,425	25
Hours at baby and P. S. conferences	1,715	55
Hours at tuberculosis clinics	779	15
Total number of hours	5,920	35

* Includes 124 wrong addresses; 954 not seen; a total of 1,078 absent visits.

† Includes 17 wrong addresses; 116 not seen; a total of 133 absent visits; 108 ophthalmia visits were also made.

‡ Includes 53 wrong addresses; 522 not seen; a total of 575 absent visits. 2,042 visits to positive cases; 1,381 to contact cases and 832 to suspect cases were made.

"HYPERVITAMOSIS."

It has been demonstrated by animal experiments that an excess of vitamins may be injurious, producing a condition which one now hears referred to as "hypervitamosis." In order, however, to produce serious consequences, a dosage of vitamins is required many times larger than any amount which could possibly be supplied in connection with a diet which either a human being or an animal would voluntarily eat. Even then there is doubt whether the results observed are due to the vitamins themselves or to associated constituents or properties of the foodstuffs.

VITAL STATISTICS, JULY, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JULY, 1929, WITH COMPARATIVE FIGURES FOR JULY, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	**763**	781	—18	**11.37**	11.73	—.36
Nonresidents deducted	**594**	619	—25	**8.85**	9.29	—.44
By Age:						
Under one year	**75**	118	—43	**1.12**	1.77	—.65
One year to four years, inclusive	**25**	34	—9	**.37**	.51	—.14
Sixty years and over	**302**	323	—21	**4.50**	4.85	—.35
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**45**	42	+3	**.67**	.63	+.04
Arteriosclerosis	**32**	16	+16	**.48**	.24	+.24
Heart disease	**141**	161	—20	**2.11**	2.42	—.31
Nephritis, chronic	**45**	35	+10	**.67**	.52	+.15
Infant and Maternal Mortality:						
a. Total registered live births *	**1,270**	1,311	—41	**18.92**	19.68	—.76
b. Registered stillbirths	**30**	42	—12	**.45**	.63	—.18
Stillbirths per 1,000 births and stillbirths †	—	—	—	**23.08**	31.04	—7.96
c. Deaths of mothers from causes incident to childbirth	**8**	11	—3	**.12**	.16	—.04
d. Deaths of mothers per 1,000 births and stillbirths †	—	—	—	**6.15**	8.13	—1.98
Deaths of children in first year of life	**75**	118	—43	**1.12**	1.77	—.65
Deaths in first year per 1,000 live births,†	—	—	—	**59.05**	90.01	—30.96
Violence:						
Accidents	**42**	51	—9	**.62**	.76	—.14
Homicides	—	1	—1	—	.015	—.015
Suicides	**10**	8	+2	**.15**	.12	+.03
Miscellaneous:						
Alcoholism, acute or chronic	**6**	6	—	**.09**	.09	—
Broncho-pneumonia	**26**	37	—11	**.39**	.55	—.16
Cancer	**98**	110	—12	**1.46**	1.65	—.19
Cirrhosis of the liver	**4**	2	+2	**.06**	.03	+.03
Diabetes mellitus	**22**	6	+16	**.33**	.09	+.24
Diarrheal diseases, children under two years of age	**10**	28	—18	**.15**	.42	—.27

* Figures for live births subject to increase.
† Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	1	9	—8	.015	.13	—.115
Deaths.	1	—	+1	.015	—	+.015
Cerebrospinal meningitis.....Cases..	1	5	—4	.015	.07	—.055
Deaths.	1	2	—1	.015	.03	—.015
Diphtheria.....Cases..	97	44	+53	1.44	.66	+.78
Deaths.	4	4	—	.06	.06	—
Influenza.....Cases..	2	14	—12	.03	.21	—.18
Deaths.	1	7	—6	.015	.10	—.085
Measles.....Cases..	117	94	+23	1.74	1.41	+.33
Deaths.	—	—	—	—	—	—
Pneumonia (lobar).....Cases..	29	62	—33	.43	.93	—.50
Deaths	12	12	—	.18	.18	—
Scarlet fever.....Cases..	69	84	—15	1.03	1.26	—.23
Deaths	—	1	—1	—	.015	—.015
Tuberculosis (pulmonary).....Cases..	129	148	—19	1.92	2.22	—.30
Deaths.	43	40	+3	.65	.60	+.05
Tuberculosis (other forms).....Cases..	21	27	—6	.31	.40	—.09
Deaths.	7	5	+2	.10	.07	+.03
Typhoid fever.....Cases..	12	7	+5	.18	.10	+.08
Deaths.	2	1	+1	.03	.015	+.015
Whooping cough.....Cases..	192	90	+102	2.87	1.35	+1.52
Deaths.	2	3	—1	.03	.04	—.01

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

CITY OF BOSTON PRINTING DEPARTMENT.

1559

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

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CANCER.

According to an old saying, our bodies so completely change in the course of seven years, that we are really not the same persons that we were seven years ago. While this statement may not be acceptable as an established biological fact, it does, nevertheless, serve to remind us that our bodies, even during life, are not permanent physical structures. The minute cellular elements which in the aggregate give us our physical characteristics are continually disappearing and being replaced by the development of new cells to serve in their turn their purpose for a while and likewise to disappear. The spleen has been called the graveyard of the "red blood corpuscles." The body is continually throwing off through the excretory organs the broken down or decomposed products of former living cells. What we call life is the manifestation of the power of regeneration, the replacement of the old by the new.

When the new are produced at a greater rate than replacement requires, growth occurs. Distinguishable differences in the component parts of the microscopic germ of the future being gradually unfolded and by a process of cell multiplication the skin and nervous system, bones and blood, and the digestive apparatus of the adult are produced. This, however, is not the whole story. A mysterious agency directs and regulates the process. In the developmental growth of each bodily structure there is a specialization of tissue to enable the

organ to perform its destined function. Blood vessels and lymph channels and supporting structures are so arranged as to assure stability and the means of proper nutrition. Nerve fibers extending from an interlocking central nervous system are provided for functional control. The agency which directs the process of cell multiplication goes still further. It determines the external contour of our bodies. It dictates a symmetry of corresponding parts and, finally, stamps us with the label of our ancestry.

At a certain point the directing agency varies the developmental process and the physical characteristics of sex appear and finally manifest themselves even to differences in the distribution of muscle and fat at the hips and shoulders.

Eventually, the rate of cell multiplication is checked and continues only to meet the needs of maintenance and repairs. This does not necessarily mean a constant rate. A muscle may be increased in size when new tasks are imposed upon it. Where the skin is exposed to special wear, the epithelial cells take on more active growth to form the protective layers of horny epidermis seen in the workman's calloused hands or in the troublesome corn.

The white blood corpuscles multiply rapidly to combat infection. For reasons still unknown, the eosinophils increase in response to infestation with intestinal worms. Broken bones are knit again and damaged material replaced. When an extra supply of epithelial cells is needed to repair a superficial injury they are forthcoming. If, for any reason, the kind of cells which occupied the site of a destructive injury cannot be restored, the agency which strives to make repairs will try to fill in the spot with cheaper material, with cells more easily fabricated or, in other words, with fibrous connective tissues.

Cell multiplication does not always produce satisfactory results. The directing agency is liable to derangements in its operation. Evidence of failure to accomplish the purpose to be desired may appear in connection with either construction, maintenance, or repair. Embryonic development may produce a monstrosity which bears slight resemblance to the normal being. More often, faulty workmanship is less conspicuous. There may be inability of some vital organ to function properly from a developmental defect so obscure that the infants' death is credited in official statistics to the terminal pneumonia or enteritis. There may be derangements in the process of growth which are not necessarily fatal. Defective development may appear as an asymmetry in limbs or features of practical importance only because indicative of other hidden abnormalities which may impair a man's usefulness to mankind. The differentiation of sex may be incomplete with varying results. The sissy man whose

sexual abnormality may be betrayed physically only by his shoulder or his thigh will probably be a harmless sort of individual, but the woman of mixed sexuality, distinguished by the possession of part of the mind of a man and the lack of some physical attributes of a woman has earned the title "the trouble maker of the world."

Mankind is also subject to a serious affliction of another sort because of ineffective control of growth. Cell production and reproduction may run wild. One or more kinds of cells may be involved. Visible deformity or enlargement may or may not result.

An increase in the white blood corpuscles is a normal reaction to a bodily infection. Reinforcements are needed to combat the invading bacteria. When the reason for their services has passed, they should disappear. The white blood corpuscles may also increase greatly for no apparent purpose and from causes not yet understood. In speeding up their manufacture, immature and imperfect forms appear. Characteristic constitutional symptoms also accompany a leukaemia, but the excessive production of white blood corpuscles is an early and outstanding feature.

ERRATA.

Page 193, lines 10 and 11: omit quotation marks.
Page 193, line 17: "unfolded" should read "unfold."
Page 194, line 38: "infants'" should read "infant's."
Page 195, line 28: "ligamentous support" should read "ligaments."
Page 196, line 11: "exposes" should read "expose."
Page 196, line 18: "individual" should read "individuals."
Page 196, line 43: "aeromegaly" should read "acromegaly."
Page 197, line 14: "low" should read "local."

cease. Perhaps the superfluous tissue may partly or wholly disappear.

In other instances local growths appear in which control of cell production seems wholly lost. A useless mass of tissue piles up without the development of correlated structures to provide it with nutrition and support. As its size increases it interferes mechanically with the functions of adjacent organs. Before long, the growth breaks down and rots. Its cellular elements get loose and are carried by blood or lymph to other regions of the body where they give rise to similar growths.

Unregulated cell production may occur in persons of any age. Certain malignant tumors, even when appearing in later life, seem

to be related to developmental defects. Such tumors may have cellular elements of an embryonic type.

Failure, however, to control cell production properly, whether resulting in malignant growths or not, manifests itself far more often when persons have passed their physical prime, and show evidence of waning vital force in various ways. It is usually a natural process of maintenance or repair, which goes wrong. Cancer appears where there is physiological activity or mechanical irritation. It develops from an extra need of cell production for replacement purposes. The area and protective function of skin and mucous membrane exposes them especially to damage. The elements which most often characterize malignant growths in adults are epithelial cells.

Power to control cell production is not always lost with age. A pipe is a frequent cause of cancer about the mouth. In some old men the irritating pipe stem never causes more then an efficient protective callous on the lip. A fibrous enlargement of the uterus, and of its anatomical counterpart, the prostate in the male, is very common in persons reaching middle life. In some individual, no sign of fibrous overgrowth in these organs ever appears. In many such cases local reasons are not to be found to furnish a plausible explanation of freedom from this affliction.

When growth or nutrition goes wrong, whether in plants, animals or human beings, we are accustomed to see the finger of suspicion pointed to food or infection. Both food and infective poisons have been suspected to be responsible for cancer, by operating directly on the individual or possibly by impairing the ability of his progenitors to produce a normal being. One may easily find encouragement to search for a cause of cancer in food. There is the evidence of the relation of food to diabetes, to the anaemias and to the proper maintenance of vital processes generally. A suggestion of a possible direct relation between food and cell production is furnished by the curious cell proliferation in various organs, noted by Howe and others to result from a dietary deficiency.

An infective factor in the causation of cancer has long been sought. It is the idea which appeals to popular imagination. It receives encouragement from observations of the results of certain parasitic injuries in plants and animals as well as from experiments in transplanting malignant cells. Then there is the general principal that infective poisons always tend to derange the operation of vital functions.

Those who care to speculate regarding the cause of cancer need not, however, confine themselves to a narrow consideration of food or parasitic bacteria. Not only does the relation between aeromegaly and an abnormal pituitary invite attention, but there is the evidence

of the relation of emotions on the secretions of the ductless glands and on nutritive processes generally. Then there is the observation of Dr. Charles H. Mayo which still remains unexplained, that cancer grows only where the reaction of the secretions is acid, whether normally so or from abnormal causes.

As in our efforts to control so many other diseases, less progress has been made in prevention than in treatment. In treatment, chances of success depend as yet upon ability to take advantage of one or the other of two characteristics of a cancer.

Whatever the person may lack or possess to make possible a cancerous growth, the dangerous cell production is at first a local affair and if, before they have a chance to scatter in the body, the dangerous cells be removed by cutting them out, together with the abnormal low conditions from which they developed, the cancer will be "cured" so far as trouble from that particular local growth is concerned.

The other form of treatment depends for success on the fact that the cells of a malignant growth are unable to withstand destructive agents to the same extent as normal cells. These agents include chemical poisons like the old arsenical paste, various forms of radiant energy including the X-rays and emanations from radium, and the rays of the lower end of the spectrum, or in other words, heat. Plain heat would destroy a cancer if it could be so directed and controlled in degree in the cancerous growth as to avoid a dangerous destruction of adjacent normal tissues as well. Under most conditions, radium will be found more satisfactory than heat in the treatment of a cancerous growth, but the same problem of the control of destructive powers within the range of tolerance of normal cells has to be met whether radium, heat or any other of the common non-operative forms of cancer treatment be employed. The same problem of control confronts the practical utilization of the high frequency electrical treatment in the destruction of cancerous cells.

There are recorded in medical literature apparently well authenticated instances of the disappearance of extensive cancerous growth under various circumstances. To cite one such instance:

In 1894 a man with clinical symptoms indicating cancer of the liver, underwent an exploratory operation in a hospital with which the writer was connected. The appearance of the diseased tissue was found consistent with cancer. A portion of the liver was excised and sent to the laboratory. The report came back "carcimona." Thereupon, the incision was closed. In some unaccountable way, the patient developed erysipelas in the wound. He was dangerously sick for a long time with an extremely high temperature, but he eventually recovered.

When he was lost sight of six months later by his return to the part of the country whence he came, he was free from any subjective or objective symptoms of cancer. The hospital physician who was delegated to report the case was astonished to find that medical literature already recorded similar instances of an apparent disappearance of cancer after an attack of erysipelas.

Cases in which cancer is supposed to have disappeared under other circumstances are also to be found reported in medical literature. This does not necessarily mean that in any of them the conclusion was correct, either with respect to diagnosis or to outcome, but the association of supposed disappearance of cancer with acute infections suggests certain possibilities, for example, the destruction of malignant cells by a high fever as the buried spirochetes in the paretic's brain succumb to the temperature of malaria; or that some biological poisons when produced in the body have the power of reaching and destroying malignant cells, or perhaps of stimulating the body itself to produce something which accomplishes the same result.

Various attempts have been made at different times to treat cancer on the assumption that biological poisons might directly or indirectly affect a cure. The Cooley treatment which had a vogue for several years was based on the apparent evidence of the favorable effect of an erysipelas infection on cancer.

Notable success has been attained in destroying some infective organisms in the blood stream by means of chemical poisons, and as a natural sequence various chemical preparations have been introduced into the body in one way and another in the hope that they might reach and destroy cancer cells. The administration of some lead preparation for this purpose is an old idea. In a recent form, it has given rise to claims which call for consideration; but up to the present, constitutional treatment has not tended to become a popular method of dealing with the cancer problem. Too often, it has been clearly evident that the only effect has been to hasten death.

The prevention of cancer is in the same unsatisfactory state as the prevention of cardio vascular degeneration. Like the death rate from diabetes, that from cancer is generally believed to be increasing. The testimony of official statistics to this effect is not to be explained by the assertion that "more people now reach the cancer age." Human susceptibility to some diseases is decreasing and to others increasing. It is not inherently improbable that of persons who reach a certain age more now die of cancer than some years ago, but in the light of the writer's professional experience plus ten years' effort to improve the creditability of death certificates presented at the Boston Health Department, he would not venture

an opinion from any available statistical data as to the present trend of the cancer death rate. Changing practices of physicians in reporting causes of death, especially in persons in middle life, better diagnostic methods and the more common use of X-rays as a diagnostic aid have served to increase steadily reported deaths from cancer in recent years and will undoubtedly continue to do so for years to come. Statistical increases from such causes are too great to permit of estimates of other factors in official records, or to justify comparisons regarding deaths from cancer in different cities or with other countries. Moreover, it should be better recognized that carcinomatous growths are not only common in middle life, but that they may not have reached a stage at which they can be called a direct or contributory cause of death when death occurs. Death certificates can never record the prevalence of cancer in later life. Like inability of the muscle to take up sugar from the blood, the failure of the person to control his cell production is a symptom rather than a disease. A malignant growth in a person in early life suggests a developmental defect, a lack of something with which most persons are endowed. The cancer of later years usually appears as a single feature of a physical picture which portrays the loss of something that the person once possessed. As insulin may now be given to supply the diabetic with something which he has lost the power to produce, so any day there may be found a makeshift for stopping a malignant growth, but the real cancer cure awaits the discovery of Ponce de Leon's Isle of Bimini and its fountain of perpetual youth.

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection?

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the November, 1927, issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

Tetanus.

Tetanus has been defined as an infectious disease "characterized clinically by tonic spasms of the muscular system, with very great increase of all reflexes." It is due to the bacillus tetani described by Nicolaier, which usually finds admission to the body through external wounds. The statistics of tetanus are of considerable interest, but it does not appear that they have been assembled in a convenient form. For the present purpose, the mortality from tetanus has been brought together for the period 1916–26 for the United States registration area with the corresponding rates per 100,000 of population.

MORTALITY FROM TETANUS, UNITED STATES REGISTRATION AREA, 1916–26, PER 100,000.

Deaths.		Rate.	Deaths.		Rate.
1916	1,225	1.7	1922	1,586	1.7
1917	1,329	1.8	1923	1,624	1.7
1918	1,285	1.6	1924	1,565	1.6
1919	1,370	1.6	1925	1,503	1.5
1920	1,432	1.7	1926	1,377	1.3
1921	1,614	1.8	1927	1,437	1.3

It is shown by this table that there has been a material reduction in the rate from tetanus from 1.8 per 100,000 in 1917 and 1921 to only 1.3 per 100,000 in 1927. This is the lowest rate that has ever prevailed in this country as far as the available information enables us to judge. The average mortality rate from tetanus during 1906–10 was 2.1 per 100,000. The present rate of 1.3 is just about half the rate prevailing during the beginning of the period for which trustworthy data have been collected by the United States Census Office.

Even so, however, the rate for this country is still excessively high. For England and Wales the prevailing rates since 1916 have fluctuated between 0.5 and 0.5 per 100,000. During 1927, the rate was 0.4 or respectively 0.7 for males and 0.1 for females. In this country in 1924, out of 1,479 deaths from tetanus in the registration states, 1,041 were males and 438 were females. The rate apparently is much higher among the colored population than among the whites.

Of exceptional importance in tetanus is the geographical distribution. According to Dr. Henry L. Woodward, a recognized authority on the subject, writing some years ago, "The disease in this country is more prevalent in the Atlantic States, in the Hudson

Valley, and on Long Island. In England it has not been very common, though more so of late years. The disease is much more frequent in tropical countries and especially among infants, where the infection occurs usually at the navel. In Jamaica and Cuba it is quite frequent and about eighty per cent of the deaths from the disease are in infants. In the United States the infection has been frequent following wounds from caps and blank cartridges formerly used very extensively on Independence Day. The warnings in the medical press, and later in the lay press, and the laws passed against the sale of those dangerous toys to children have greatly reduced the number of cases due to this cause."

The last statement unquestionably explains in a large measure the reduction in tetanus during recent years. The propaganda against dangerous toys for the Fourth of July and Christmas celebrations in the South has born fruit. No recent statistics appear to have been compiled as regards the frequency of the disease in tropical countries, particularly south of us, but there are probably no reasons for taking exception to the statement that the disease is more common in tropical countries than in the United States. Thus, for illustration, in 1926 there were 43 deaths from tetanus in the city of Sao Paulo, Brazil, in a population of about 900,000. This would give an approximate death rate of 5 per 100,000, or approximately three times the normal rate in the United States. In Sao Paulo 29 of the deaths were males, and 14 females. In the city of Santos, there were 27 deaths from tetanus in 1926 in a population of about 130,000, yielding a rate markedly higher than for Sao Paulo. By way of contrast, in all Canada, excepting the Province of Quebec, during 1925 there were only 33 deaths from tetanus in a total estimated population of 6,700,000. These extremes clearly indicate the wide variations in local incidence and geographical distribution, suggestive of soil conditions favorable to the growth and liability of the bacillus tetani.

The age factor in tetanus has always been one of outstanding importance. I, therefore, include the following tabulation of 1,503 deaths by divisional periods of life for the United States registration area for 1925.

DEATHS FROM TETANUS BY DIVISIONAL PERIODS OF LIFE, UNITED STATES REGISTRATION AREA, 1925.

Age.	Deaths.	Age.	Deaths.
Under 5	348	30–34	53
5–9	256	35–44	111
10–14	243	45–54	100
15–19	117	55–65	71
20–24	67	65–74	48
25–29	68	75 and over	21
Under 30	1,099		404

This table confirms the well-known view that tetanus is peculiarly a disease of early childhood since over half the deaths occurred at ages under fifteen. To be more specific, of the 348 deaths at ages under five, 238 occurred at ages under one, 14 at age one, 27 at age two, 30 at age three and 39 at age four. Rather suggestive, however, is the rise in tetanus deaths between ages thirty-five and fifty-four, for which at present no explanation can be given.

SANITARY ETIQUETTE.

Among the several modes of transmission of human disease, modern sanitarians have assigned high place to personal contact. There are a large number of serious and important diseases, known as contact infections, which are transmitted and propagated largely, if not exclusively, by personal contact. Such diseases include penumonia, influenza, diphtheria, scarlet fever, measles, whooping cough, smallpox, chicken pox, mumps, and the common cold. These are, of course, all germ diseases. Their method of spread is through personal contact between a person who harbors the infection and another who is susceptible to the same infection. In typhoid fever and some other diseases the person who harbors the infection need not necessarily be sick; he may harbor the infection as a carrier — and in some diseases the carrier is an important source of transmission.

These personal contacts may be direct or indirect, the more direct the more dangerous. Such contacts literally represent an exchange of bodily secretions or excretions between the persons involved. These contacts are far more common than most people realize; and under our modern complex social organization, especially in large cities, close personal contacts in a variety of ways are absolutely unavoidable. Some depend upon customs and usages difficult to break up, as, for example, inconsiderate use of the handkerchief with soiling of the hands, indiscriminate kissing, and handshaking. The Chinese custom of bowing and then shaking one's own hand is far more desirable from a sanitary standpoint. There are a number of these contacts, however, which can not be defended on any grounds. They simply represent unhygienic manners. One of these habits is particularly reprehensible, and it is the habit of passing some article to another person after it has been wet with saliva.

In view of the prevalence of influenza, which is one of the important contact diseases, it is a good time to bring to public attention this habit, which is very common, easily avoidable, and thoroughly condemnable from every standpoint. This is the habit

of sticking one's fingers in his mouth before performing some action that involves another person. It is usually associated with the passing of some article to another person after it has been wet with saliva. Could there be any closer or more direct personal contact between individuals?

The prevalence of this practice is widespread. From limited observation, it would appear particularly common among those who have to handle paper of any kind; that is, paper which is piled in stacks or bound in books. But it is by no means confined to those engaged in such activities. With many persons it seems simply to be a form of nervousness, or a nervous bad habit.

A while ago, some sanitarian, impressed with the undue prevalence of customs and habits involving an exchange of saliva among persons in their daily contacts, cleverly suggested, in order to visualize what was really going on, that we should imagine salivary secretions colored blue. He then, in imagination, followed a few individuals through a day of active existence. At the end of the day he tried to evaluate them chromatically. He concluded that most of them in the color scale would be found well spotted to an indigo blue.

What should we do about it? Certainly in matters of this kind education is far more effective than law. If people, generally, disapprove unhygienic habits, then public opinion will correct them speedily.

Why condemn promiscuous spitting, unguarded coughing and sneezing, and common drinking cups, if we continue to permit people to contaminate objects by saliva-moistened fingers? It is all of a piece and all should be condemned together.

The essence of good manners, is, after all, consideration for others. This is applicable equally to social or hygienic good form. In this golden age our culture should keep pace with other progress. (*U. S. P. H. S.*)

COMMUNICABLE DISEASES.

Watch out for communicable diseases in your household. Simple symptoms such as a sore throat, a rash, a running ear or nose, general malaise or indisposition, a cough, or pimples may be indicative of a communicable disease that you should guard against and take all necessary precautions to prevent the spread of the disease in your home, the school and the neighborhood. When these symptoms appear in your child treat it as a communicable disease, isolate the child and call your physician. You should constantly observe the

same kind of cleanliness in your home which doctors and nurses carry out in contagious disease hospitals to protect themselves and other patients.

Do your part with the beginning of the school year in keeping down the number of communicable disease that are daily reported and that so often become fatal. Your part consists in watching your children for any symptoms that have been mentioned and that are likely to be communicable diseases.

SUMMARY OF WORK, AUGUST, 1929.

ADMINISTRATION DIVISION.

Legal notices	148	Personnel:	
Settlements:		Temporary appointment	1
Total cases	9	Retirement	1
Notices	69	Permanent appointments	2
Bills	22	Provisional	1
		Prosecution approved	1

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	880	Beverage	9
Denatured alcohol	12	Dump	1
Denatured alcohol license rejected,	1	Milk	126
Hen licenses	12	Pedlers	86
Manicure-massage granted	107	Certificates	11
Ice cream manufacturers	8	Garbage transportation	1
Ice cream dealers	260		

MEDICAL DIVISION.

Reported cases	809	Visits:	
Nonresidents	39	By V. D. investigator	146
Deaths investigated	20	By medical inspectors to cases of communicable disease	231

BACTERIOLOGICAL LABORATORY DIVISION.

Diptheria	569
Tuberculosis	302
Typhoid	34
Gonorrhea	862
Gonorrheal ophthalmia	80
Syphilis	1,037
Other examinations*	211
Bacteriological examinations of milk	751
Bacteriological examinations of ice cream	47
Dark field	2
Genito urinary T. B.	9
Malaria	3

* Urines, 196; Vincent's angina, 2; paratyphoids, 8; chicken tumor for diagnosis, 1; urine for organisms, 1; urine for Eberthella typhi, 5; fæces for Eberthella typhi, 5; smear from tooth for organisms, 1.

Water from swimming pools examined for pollution, 64; water from beaches examined for pollution, 14.

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores, during August, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as Certified Milk, or pasteurized as Certified Milk — Pasteurized.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.31	3.85	13,000
Antetomasso, Peter	12.42	3.75	12,000
Bancroft, Hugh *	13.10	4.85	16,000
Brandley, F. J. & P. J.	12.49	3.77	200
Casey, James	12.20	3.62	35,000
Cashin, James F., & Co	12.43	3.93	27,000
Cedar Hill Farm, Inc	12.54	3.65	400
Chapin, George L.	12.40	3.87	2,000
Clark, Levi	12.03	3.68	9,000
Corkery, John J.	12.49	3.93	22,000
Cosgrove, Martin S.	12.60	4.02	14,000
Cummings, Francis S.	12.22	3.67	12,000
Daley, John	11.99	3.43	9,000
Dean, Louis W.*	13.22	4.10	37,000
Deerfoot Farms Company	12.46	3.88	10,000
Denehy, Timothy	12.60	3.65	10,000
Driscoll, William B., Company	12.38	3.83	10,000
Edgerly, Frank S.	12.76	4.02	13,000
Elm Spring Farm Company	12.16	3.74	42,000
Ferguson, Malcolm D.	12.52	3.88	157,000
Garvin, Charles E.	15.09	5.42	1,500

* Milk from tuberculin tested cows.

Name of Dealer.	Solids.	Fat.	Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Giroux, J. E. & H. J.	12.30	3.85	8,500
Griffin, Joseph L.	12.77	3.98	14,000
Gushee, Chester W.	12.44	3.81	12,000
Hampden Creamery Company	12.57	3.65	13,000
Herlihy Brothers, Inc.	12.36	3.77	59,000
Hickey, James B.	12.09	3.77	12,000
Holden, John E.	12.55	4.05	21,000
Hood, H. P., & Sons, Inc.	12.34	3.87	22,000
Jones, William T., Company	12.25	3.79	30,000
Kendall Brothers	11.88	3.35	8,000
Kingston Brothers	12.12	3.48	17,000
Knapp, George J.	12.37	3.70	43,000
Lang Brothers	12.18	3.77	13,000
Larsson, Charles	12.13	3.65	28,000
Lyndonville Creamery Association	12.61	4.01	25,000
Manning, Harriet	12.17	3.41	20,000
McAdams, J. F., & Brothers, Inc.	12.46	3.89	9,500
McKernan, James	12.44	3.80	14,000
Munchbach, Albert W.	12.31	3.55	70,000
New England Creamery Products Company *	12.80	4.10	16,000
Robinson, A. J.	13.23	4.36	12,000
Schuster, Adam	12.56	3.82	11,000
Seven Oaks Dairy Company	12.35	3.85	10,000
Shick, Jacob	12.45	3.68	33,000
Somerset Farms Creamery Company	12.40	3.90	14,000
Sterling Farms Milk Company	12.24	3.74	26,500
Stone, H. L.	12.19	3.70	37,000
Stuart, W. E., Company	12.60	4.00	23,000
Turner Centre System	12.36	3.85	12,500
United Farmers Co-operative Creamery Company	12.38	3.79	30,000
Walker-Gordon Laboratory Company *	12.44	3.90	050
Weiler, E., & Sons	12.18	3.70	46,000
Westwood Farms Milk Company	12.19	3.79	13,000
White Brothers	13.29	4.83	23,000
Whiting Milk Companies	12.28	3.79	93,000
Whittemore, W. D.	12.48	3.88	14,000
Williams, Edward C.	12.78	4.17	11,000
Wiswall, Granville A.	12.22	3.75	32,000
Woodland, Charles L.	12.64	3.90	22,000

* Milk from tuberculin tested cows.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P. & Sons, Inc....	12.22	3.68	25,000
Brown, M. & Sons.....	Whiting Milk Companies...	12.51	4.00	14,000
Cloverdale Company, The.....	Turner Centre System.....	12.43	3.88	13,000
Economy Grocery Stores Corporation.	Whiting Milk Companies...	12.31	3.80	15,000
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	12.61	3.93	24,000
Morgan Brothers Company *...	New England Creamery Product Company.	12.45	3.90	31,000
Winer, M. Company.....	M. Winer Company.....	12.67	4.30	108,000

* Milk from tuberculin tested cows.

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Antetomasso, Peter.....	12.72	4.15	8,000
Cosgrove, Martin S.....	12.92	4.25	12,000
Cummings, Francis S., Company.....	12.57	4.12	6,000
Dean, Louis W.....	13.32	4.10	24,000
Elm Spring Farm Company.....	12.81	4.27	141,000
Griffin, Joseph L.....	13.13	4.25	8,000
Herlihy Brothers, Inc.....	12.40	3.96	62,000
Hood, H. P., & Sons, Inc.....	12.52	4.19	9,500
Jones, W. T., Company.....	13.04	4.30	2,500
McAdams, J. F., & Brothers, Inc.....	12.90	4.35	6,000
Robinson, A. J.....	13.22	4.43	13,000
Seven Oaks Dairy Company.....	12.52	3.93	4,000
Sterling Farms Milk Company.....	12.92	4.05	16,000
Turner Centre System.....	13.10	4.46	7,000
Weiler, E., & Sons.....	12.62	4.22	20,000
White Brothers.....	13.09	4.45	14,000
Whiting Milk Companies.....	12.44	4.03	33,000
Woodland, Charles L.....	12.54	4.10	4,000

CERTIFIED MILK.

Raw milk, produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.76	4.25	3,000
Cummings, Francis S.	Alta Crest	12.78	4.05	1,100
Hood, H. P., & Sons, Inc.	Own	13.20	4.15	3,000
New England Creamery Products Company.	Bellows Stock Farm	12.84	3.85	1,800
Walker-Gordon Laboratory Company.	Own	12.12	3.65	5,000
Whiting Milk Companies	Hampshire Hills	12.18	3.50	2,800

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for Certified Milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.46	3.70	175
Hood, H. P., & Sons, Inc.	Own	13.08	4.00	250

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:	
Milk from wagons	507
Milk from stores	726
Milk brought by citizens	2
Vinegar	42
Water	3
Drug	1
Polishes	13
Miscellaneous examinations	10
Samples referred to Bacteriological Laboratory for examination:	
Milk	751
Ice cream	47
Court cases	16
Fines	275

SCHOOL OPENING.

With the opening of school comes a responsibility we must all face. Although the school teacher, the physician, and the nurse may be of great service in the school, the parents of the child must shoulder some responsibility in cooperating with the authorities in their efforts to assist the child at the opening of the school term.

Instructions and advice of the school physician should be followed to the letter, and if the child needs treatment it is the duty of the parents to provide it. Only in this way may proper inspection and examination be carried out to advantage to the pupil and the community, thereby affording a protection to your own child and those with whom it associates in school.

DAIRY DIVISION.

Total services	1,243	Total cattle inspected	10,630
Dairies inspected	720	Inspections of milk plants and licensed dealers	186
Scoring above 50*	524	Bacteriological examinations	204
Scoring below	196	Country creamery inspections	7
With milk rooms	560	Sediment tests	107
Without milk rooms	160		
Inactive	14		

* Passable mark.

FOOD INSPECTION DIVISION.

AUGUST, 1929.

District inspections	3,306
Reinspections	471
Market inspections	1,590
Terminal inspections	283
Vehicle inspections *	6,965
Stand inspections	2,003
Complaints	42
Notices to abate	156
Court cases entered	4
Fines	80
Samples taken	38

Condemnations:

Confectionery	49 pounds	Meat	1,146 pounds
Dairy products	2 pounds	Nuts	1 pound
Fruit	214 pounds	Vegetables	29,502 pounds
Groceries	10 pounds		

Pedler Service:

Numbers assigned	39
Licenses certified	117
Vehicles approved	674
Licenses to remove bones	51

* This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market.

ABATTOIR DIVISION.

Cattle inspected	2,517	Parts condemned	473
Calves inspected	2,868	Animals condemned	35
Swine inspected	3,071	Total of meat condemnations (pounds)	17,818
Sheep inspected	133		

SANITARY DIVISION.

Original inspections	2,390	Complaints investigated	874
Causes for action found	1,686	Nuisances abated	1,784
Reinspections	6,309	Routine inspections	2,176
Legal notices served	161		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	17	132	90	222	31	28	59
East Boston	13	61	71	132	19	19	38
North End	13	24	46	70	2	2	4
West End	13	42	51	93	7	4	11
South Boston	13	69	63	132	19	24	43
Boston Dispensary	8	26	15	41	14	5	19
Brighton	8	9	6	15	4	1	5
Charlestown	9	23	20	43	1	3	4
Codman square	13	62	40	102	12	11	23
Hyde Park	9	39	32	71	4	8	12
Fields Corner	4	14	6	20	9	1	10
Totals	120	500	440	941	122	106	228

Districts.	Von Pirquet.	Wassermann.	Lamp.
South End	39	31	40
East Boston	25	10	—
North End	3	2	2
West End	4	6	—
South Boston	32	12	32
Boston Dispensary	7	8	—
Brighton	1	6	—
Charlestown	4	2	—
Codman square	16	5	—
Hyde Park	8	2	—
Fields Corner	2	—	—
Totals	141	78	74

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING AUGUST, 1929.

Classification.	Number.	Percentage.
After death	11	30.56
Seven days or less	2	5.55
Eight to fourteen days, inclusive	1	2.78
Fifteen to twenty-one days, inclusive	—	—
Twenty-two to thirty-one days, inclusive	2	5.55
Within First Month. (Total)	16	44.44
Within second month	1	2.78
Within third month	2	5.55
Within fourth month	3	8.33
Within fifth month	1	2.78
Within sixth month	—	—
Within seventh month	1	2.78
Within eighth month	—	—
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	24	66.66
Within second year	6	16.67
Within third year	—	—
More than three years	6	16.67
Grand totals	36	100.00

MONTHLY REPORT OF ADMISSIONS TO AND DISCHARGES FROM TUBERCULOSIS SANATORIUMS OF BOSTON CASES FOR THE MONTH OF AUGUST, 1929.

Public Sanatoriums.	Admitted.	Discharged.
Boston Sanatorium	26	26
North Reading State Sanatorium	9	10
Lakeville State Sanatorium	9	3
Rutland State Sanatorium	4	11
Rutland Prison Camp	2	—
Westfield State Sanatorium	4	10
Tewksbury	2	—
Totals	56	60

Private Sanatoriums.	Admitted.	Discharged.
Doctor Lapham's Sanatorium	1	1
Doctor Crane's Sanatorium	1	4
Plymouth County Sanatorium	1	3
Totals	3	8

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, August, 1929.

Physical examinations	953
Toxin-antitoxin administrations	53
Vaccinations	889
Vaccination certificates issued	361
Anti-typhoid inoculation	1

Report of Child Health Conferences, August, 1929.

NUMBER OF CONFERENCES AND ATTENDANCE.

Station.	Number of Babies.	Number of Pre-school (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	246	23	269	22	7	29	4	67
31 Lincoln street, Brighton	131	14	145	20	2	22	5	29
Charlestown Municipal Building	402	10	412	32	1	33	8	52
Codman Square Library	391	55	446	63	11	74	8	56
Columbia Road Municipal Building	478	20	498	54	4	58	8	62
1 Arcadia street, Dorchester	469	72	541	57	—	57	9	60
East Boston Health Unit	506	69	575	112	2	114	9	64
Hyde Park Municipal Building	233	31	264	24	3	27	9	29
Curtis Hall, Jamaica Plain	225	37	262	39	2	41	4	66
41 North Margin street	215	62	277	19	2	21	9	31
Roslindale Municipal Building	226	65	291	28	1	29	4	73
Children's Hospital	150	18	168	15	1	16	4	42
1049 Columbus avenue	413	22	435	54	2	56	9	48
Vine Street Municipal Building	462	19	481	71	7	78	9	53
133 Dorchester street, South Boston,	446	101	547	85	30	115	9	61
122 Tyler street	102	19	121	10	5	15	4	30
Shawmut Avenue Municipal Building,	185	49	234	21	7	28	4	59
57 East Concord street	241	24	265	36	1	37	5	53
17 Blossom street	380	73	453	26	—	26	9	50
Totals	5,901	783	6,684	788	88	876	130	52

TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS.

Station.	Toxin-Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	3	2	1	6	73
31 Lincoln street, Brighton	3	2	2	7	93
Charlestown Municipal Building	—	—	—	—	280
Codman Square Library	2	4	6	12	182
Columbia Road Municipal Building	4	3	6	13	276
1 Arcadia street, Dorchester	—	2	6	8	313
East Boston Health Unit	—	—	—	—	32
Hyde Park Municipal Building	4	6	10	20	155
Curtis Hall, Jamaica Plain	1	—	—	1	123
41 North Margin street	1	—	—	1	13
Roslindale Municipal Building	2	2	2	6	132
Children's Hospital	—	2	1	3	21
1049 Columbus avenue	4	5	7	16	265
Vine Street Municipal Building	4	4	3	11	257
133 Dorchester street, South Boston	—	—	—	—	98
122 Tyler street	1	—	—	1	16
Shawmut Avenue Municipal Building	5	1	—	6	22
57 East Concord street	2	5	4	11	26
17 Blossom street	3	4	3	10	18
Totals	39	42	51	132	2,395

DENTAL ACTIVITIES AT HEALTH UNITS.

AUGUST, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	177	116	264	78	194	829
Number of treatments by dentists	240	121	251	100	206	918
Number of treatments by hygienist	16	49	63	12	71	211

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

AUGUST, 1929.

BOSTON DISPENSARY:

Calls by district physician	96

BOSTON LYING-IN HOSPITAL:

Number prenatal clinics	18
Total attendance	221
New cases	58

COMMUNITY HEALTH ASSOCIATION:

Homes visited	8,517
Cases referred	419
Diseases reported	25
Number of meetings of mothers' club	15
Attendance	209

CHILDREN'S HOSPITAL:

Number of clinics	4
Attendance	38

BOSTON HEALTH DEPARTMENT:

Refraction Service:

Number of refractions	14
Glasses prescribed	9
New cases	10
Diagnosis	15

NURSING SERVICE.

HOMES VISITED		12,344
CHILD HYGIENE:		
Visits to new cases	1,199	
Visits to old cases	8,062	
Total		*9,261

* Includes 70 wrong addresses; 778 not seen; a total of 848 absent visits.

COMMUNICABLE DISEASES:		
Visits to new cases	401	
Visits to old cases	843	
Total		*1,244
TUBERCULOSIS:		
Visits to new cases	175	
Visits to old cases	3,229	
		†3,404
MISCELLANEOUS VISITS:		
Infant death investigations	47	
Maternal death investigations	1	
Patients accompanied to hospital	1	
Day nurseries	2	
Total		51
Total number of visits		13,970

	Hrs.	Min.
Hours in station by nurses	2,844	5
Hours at baby and P. S. conferences	1,743	35
Hours at tuberculosis clinics	655	25
Total number of hours	5,243	5

* Includes 12 wrong addresses; 61 not seen; a total of 73 absent visits; 151 ophthalmia visits were also made.

† Includes 32 wrong addresses; 299 not seen; a total of 331 absent visits; 1,521 positive; 1,080 contacts, 472 suspects cases were seen.

PHYSICAL EXAMINATION.

If you have not had a physical examination thus far this year, why not now. Books are balanced and accounts examined at least once a year by every business man. It is an audit of one's physical assets and liabilities that is just as important. This examination should be conducted by a competent medical man, and there should be no cause for alarm. It is just as well to know that you are physically fit as to know that you have defects. These defects may be improved and faulty habits corrected by following instructions that are given you. Resolve to breathe fresh air at all times, to get outdoors as much as possible, seeking sunshine wherever it may be found, to eat plenty of wholesome, well-selected, nutritious food, to drink plenty of water daily, to work hard, play often,— enjoying both activities — and to avoid overeating and overweight.

VITAL STATISTICS, AUGUST, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING AUGUST, 1929, WITH COMPARATIVE FIGURES FOR AUGUST, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	**755**	780	—25	**11.25**	11.71	—.46
Nonresidents deducted	**586**	612	—26	**8.73**	9.19	—.46
By Age:						
Under one year	**87**	83	+4	**1.30**	1.25	+.05
One year to four years, inclusive	**19**	26	—7	**.28**	.39	—.11
Sixty years and over	**315**	322	—7	**4.69**	4.83	—.14
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**46**	55	—9	**.68**	.82	—.14
Arteriosclerosis	**22**	18	+4	**.23**	.27	+.06
Heart disease	**137**	142	—5	**2.04**	2.13	—.09
Nephritis, chronic	**54**	50	+4	**.80**	.75	+.05
Infant and Maternal Mortality:						
a. Total registered live births *	**1,389**	1,590	—201	**20.69**	23.87	—3.18
b. Registered stillbirths	**32**	40	—8	**.48**	.60	—.12
Stillbirths per 1,000 births and stillbirths †	—	—	—	**22.52**	24.54	—2.02
c. Deaths of mothers from causes incident to childbirth	**7**	12	—5	**.10**	.18	—.08
d. Deaths of mothers per 1,000 births and stillbirths †	—	—	—	**4.93**	7.36	—2.43
Deaths of children in first year of life	**87**	83	+4	**1.30**	1.25	+.05
Deaths in first year per 1,000 live births,†	—	—	—	**62.63**	52.20	+10.43
Violence:						
Accidents	**51**	53	—2	**.76**	.79	—.03
Homicides	**1**	—	+1	**.015**	—	+.015
Suicides	**12**	10	+2	**.18**	.15	+.03
Miscellaneous:						
Alcoholism, acute or chronic	**13**	6	+7	**.19**	.09	+.10
Broncho-pneumonia	**24**	27	—3	**.36**	.40	—.04
Cancer	**104**	109	—5	**1.55**	1.64	—.09
Cirrhosis of the liver	**5**	5	—	**.074**	.075	—.001
Diabetes mellitus	**20**	17	+3	**.30**	.25	+.05
Diarrheal diseases, children under two years of age	**15**	15	—	**.22**	.22	—

* Figures for live births subject to increase.
† Rates subject to change.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON, AUGUST, 1929.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis....Cases..	6	37	—31	.09	.55	—.46
Deaths.	1	5	—4	.015	.075	—.06
Cerebrospinal meningitis....Cases..	2	4	—2	.03	.06	—.03
Deaths.	2	2	—	.03	.03	—
Diphtheria....Cases..	49	42	+7	.73	.63	+.10
Deaths.	4	3	+1	.06	.04	+.02
Influenza....Cases..	—	5	—5	—	.075	—.075
Deaths.	—	—	—	—	—	—
Measles....Cases..	26	20	+6	.39	.30	+.09
Deaths.	—	—	—	—	—	—
Pneumonia (lobar)....Cases..	27	30	—3	.40	.45	—.05
Deaths.	4	13	—9	.06	.19	—.13
Scarlet fever....Cases..	58	45	+13	.86	.67	+.19
Deaths.	—	3	—3	—	.04	—.04
Tuberculosis (pulmonary)....Cases..	135	133	+2	2.01	2.00	+.01
Deaths.	37	33	+4	.55	.49	+.06
Tuberculosis (other forms)....Cases..	39	35	+4	.58	.52	+.06
Deaths.	7	6	+1	.10	.09	+.01
Typhoid fever....Cases..	13	13	—	.19	.19	—
Deaths.	3	—	+3	.04	—	+.04
Whooping cough....Cases..	150	120	+30	2.23	1.80	+.43
Deaths.	3	2	+1	.04	.03	+.01

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

CITY OF BOSTON PRINTING DEPARTMENT.

1559

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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COLDS.

Beginning with early September, and for the following six months, the average inhabitant of Boston has to contend with a diseased respiratory tract in his efforts to live and earn a living. If he be not suffering from a diseased condition of his own air passages, or of their various ramifications, such an affliction on the part of his associates, his employees or members of his family is interfering with his work, deranging his business and upsetting his social plans.

If he seeks diversion at the theater or by attending a lecture, the continual coughing of the audience reminds him of the unmuffled motor boat which spoiled his expected Sunday morning rest at the seashore in summer.

Apart from the matter of suffering and mortality, the economic loss from so-called colds, their complications and *sequellæ* is incalculable, nevertheless, we look upon them as the Hindoo regards suffering and mortality from cholera. The employer of labor whose losses on this account are most obvious, is usually to be found waiting with fatalistic resignation for the scientist to invent in his laboratory some automatic device for reducing business losses from "colds."

Disappointment probably awaits those who are thus expecting the discovery of a simple preventive of colds. There is a great deal that we do not know about colds. We know enough, however, to

lead us to suspect that after the causation and prevention of colds have become thoroughly understood, their prevention will involve more personal effort than the average individual will voluntarily make to secure protection.

Even in the light of present knowledge, a reduction in disability from acute diseases of the respiratory tract is by no means a hopeless proposition. The efficacy of certain factors in the way of prevention has been repeatedly demonstrated in military experience and likewise in handling other collections of human beings under a control comparable to that called for by military discipline. The methods which thus seem to be justified by practical human experience are not altogether explicable by bacteriological hypotheses or consistent with brief laboratory experiments. Moreover, they sometimes fail to accomplish their purpose and consequently a reputation for scientific discernment would seem to be subserved by emphasizing such failures.

Neither are we entirely dependent upon old and more or less empirical procedures to suggest measures which may serve to mitigate the physical or financial consequences of acute respiratory infections. Within the last two decades there has been added to our knowledge of the subject a vast amount of uncorrelated observations. Someone with the right kind of brains, perhaps someone with no scientific reputation to worry about, ought to be able to tell us how to utilize all this recorded experience to greater practical advantage than has been done. The character of the material available to one with ambition in this direction is indicated in the following.

Colds begin to prevail extensively in Boston in September. The observations of the Boston Health Department suggest that their advent is postponed in seasons of unusually warm weather in the early part of September, but this is by no means certain. Before the first of November there is a noticeable subsidence in their prevalence. In December, shortly before Christmas, and continuing through the holiday period, there is ordinarily a secondary epidemic of colds with indications that the holiday shopping and visiting may be a responsible factor.

Boston observations with respect to these annual epidemics of colds would appear to conform to the experience of a large part of this country as indicated by studies of the United States Public Health Service made a few years ago. The epidemic peaks would appear to occur at about the same time as in other parts of the country. It may be noted that the usual annual curve of the two waves of epidemic colds in Boston is roughly the same as the curves for the primary and secondary epidemics of influenza in Boston in 1918.

In 1928, colds were apparently more prevalent than usual in the autumn in Boston. They were evidently of a contagious character. They were made the subject of special investigation by the Boston Health Department because reported influenza in other parts of the country suggested the idea that the Boston epidemic of colds might be a manifestation of influenza. This was probably not so, as a very definite influenza epidemic with characteristic clinical symptoms began to appear in Boston about the middle of December.

There are several factors which suggest themselves as possibly responsible for the regular epidemic appearance of colds in the early autumn. Contact diseases generally tend to begin to increase at that time. As the weather becomes cooler, windows are shut and people tend to crowd more indoors. Those who breathe the confined atmosphere get heavier and more concentrated doses of whatever pathogenic organisms others are capable of transmitting through the atmosphere. It is to be noted, however, in this connection that the prevalence of contact infections becomes markedly less in the spring, before the winter indoor crowding has appreciably changed in this part of the country.

It has also been suggested that an actual increase in infective organisms has taken place by early September by reason of the diminished bactericidal power of the rays of the sun and that colder weather by stimulating the secretions of the respiratory mucous membrane increases the means of spreading infective organisms. It can undoubtedly be accepted as a general principle that the contagiousness of any communicable disease is directly proportional to the amount of infective secretions which the patient may be producing at any time.

By autumn, there is doubtless an accumulation in the population of persons who have lost their immunity to infective organisms associated with colds by reason of freedom from exposure during the summer. Explorers and others who have been out of contact with crowds learn to expect to develop colds on their return to civilization. A physical condition built up by active out-of-door life certainly does not guarantee immunity to a cold.

Whatever may be responsible for the autumn epidemic of colds, from then on there is no lack of opportunity in Boston for a person to acquire bacteria potentially capable of producing a disease of the respiratory mucous membrane. He is bombarded with them in the gusts which come from the lungs of persons who sit behind him in the street car and theater or who cough in his face on the street. We are taught that persons may swap infective organisms in the ordinary process of close conversation. Nothing could

be better established than that the fact that dangerous organisms are distributed by eating and drinking utensils which may not only fail to be sterilized in washing, but which may be actually contaminated in the dishwashing procedure. The ordinary family hand dishwashing process serves admirably for this purpose.

It has been made a misdemeanor to spit out of doors where infective material from diseased throats and lungs rapidly becomes innocuous. The spitoon, which at least gave one a chance to see and avoid infective material, has been banished. The same material is now deposited in the handkerchief, kept where the warmth of the body preserves its pathogenic possibilities and the waitress politely coughs in her hand before she picks up the rolls for her patrons.

The autumn epidemic colds are not ordinarily disabling. As the winter season progresses, colds become more serious and complications and *sequellæ* more frequent. Absenteeism from industry in Boston and vicinity generally reaches its maximum in early March. In 1928 and 1929 it came somewhat later than usual. The exceptionally mild winters these years suggest a possible relation.

As the winter season progresses, there is a constant increase in the proportion of the urban population who are found to be carriers of hemolytic streptococci and pneumococci. This is also likely to be true of other organisms. Organisms thus found may not always appear to possess virulent possibilities, but it would seem to be fairly well established that the more serious aspect of colds and absenteeism from industry is due largely to organisms which are not usually directly responsible for diseases of the respiratory tract, but which become more widely distributed as the winter advances and which act as dangerous secondary invaders when a person's local or general condition gives them their opportunity. If this be so, it may be possible to reduce the economic losses from colds by directing attention to recognized secondary invaders whose habits and proclivities are better understood than agents which may start trouble and render the respiratory mucous membrane vulnerable to dangerous secondary invaders.

It is only recently that the principle of the isolation of the sick or debilitated, for their own sake, has come to be applied to reduce mortality in surgical and medical practice. Those weakened by surgical operations as well as those suffering from influenza or measles are likely to die if placed in hospital wards among pneumococci or certain streptococci carriers.

Two factors are essential for the development of a cold. Personal susceptibility to some infective agent or agents and the presence of these agents. Probably there is a third factor, an adequate dose of the infective agent or agents. A diseased condition of the respiratory

mucous membrane can undoubtedly be produced and maintained by a sensitiveness on the part of an individual to some protein or proteins. The so-called "hay fever" is an example of such sensitiveness resulting from the direct contact of a pollen with the mucous membrane. Similar results may be produced by a food protein to which an individual may possess a sensitiveness. To what extent, if any, an abnormal condition of the respiratory mucous membranes resulting from such protein sensitivity may increase susceptibility of an individual to the infective agents of colds is as yet involved in uncertainty. Some day it may be made clearer that there is a definite relation between the phenomenon of protein sensitiveness and susceptibility to infection. It seems quite probable from cumulative practical experience that susceptibility to colds is increased by over-eating. It is possible that this may be due to the character of the food rather than the amount. There are physicians, whose study and clinical experience entitle their opinions to serious consideration, who hold that an excessive intake of sugar is accountable in a large measure for the prevalence of our colds.

Probably the best established predisposing factor to actual infection of the respiratory mucous membrane is a chilling of the the body, especially an unequal chilling, such as may be caused by a draught. Experimental observations would indicate that a vaso-motor disturbance is thus produced decreasing the blood supply to the respiratory mucous membranes and resulting in a decreased local resistance to the invasion of infective organisms which are assumed to be already present. Physical exhaustion which likewise appears to predispose to infection may be presumed to act in a similar way. The same can be probably said of anything which tends to produce an abnormal local condition of the respiratory mucous membranes including local structural abnormalities. The exposure of a collection of men to irritating smoke, chemical fumes or any unaccustomed mechanical irritants will be immediately followed by the development of definite colds in a certain proportion of them. The relation between a hot, dried–out steam-heated atmosphere and the development of colds has been amply demonstrated as has also the bactericidal properties of the normal secretion of the respiratory passages.

When collections of human beings are not supplied with a certain amount of fresh out-of-door air each day, they show an increased liability to develop colds. There is unquestionably some important factor or factors in this matter as yet undiscovered. Be it by reason of the presence or absence of infective bacteria, protein sensitivity, psychic effects or something else, continued practical experience with collections of human beings does not conform with

experimental observations with re-breathing respired air. It has not yet been explained why the health of children who spend only one fourth of their time in schoolrooms has been found to be definitely better in rooms which are ventilated by opening the windows than when supplied by mechanical ventilation. Trouble with the tonsils and respiratory tract of crews on artificially ventilated submarines disappear with the transfer of men to other duty. We hear a great deal from public health workers about the need of tonsilectomies, but nothing about methods of preventing a condition of the tonsils which calls for the removal of these glands which were intended for a useful purpose.

The identity of infective agent or agents which act or may act as the primary causal factors in the production of colds is likewise involved in obscurity. They may not be the same well recognized organisms which it is customary to find associated with colds.

Such success as has been attained in the reduction of disability from colds and their complications has come chiefly from an adaptation of methods which have made modern surgery possible — methods of cleanliness intended to eliminate exposure to infective organisms, but which perhaps often actually give desired results by the dilution of infective material until the dose is innocuous. Even ventilation is a sort of cleanliness, whatever other factors may be also involved in its beneficial effects. That outbreaks of infections of the upper respiratory tract can be prevented and stopped in barracks and institutions by attention to surgical cleanliness of mess gear has been too often demonstrated in practical experience to need comment.

It does not seem probable, however, that a practical solution of the problem of reducing the economic loss from colds and their complications will be found in developing methods of preventing opportunities for infection. In nature, individuals may succumb to adverse influences, but when the species survives, it is by developing the power to overcome environmental dangers, not by escaping them.

The protective methods of modern sanitation between the time of the Civil War and of the Spanish War greatly decreased typhoid fever. As a consequence, the increase of non-immunes in the population made typhoid a much more serious matter in military operations in the latter war than in the former. The unimportance of typhoid fever in the World War was due to the development of an artificial method of enabling individuals to overcome infection, at least to a certain extent.

A careful statistical study of the Boston Health Department records shows that the death rate from tuberculosis in Boston has been steadily decreasing, with some fluctuations, since 1870, and probably at the same rate for twenty years previously.

In about eighty years the death rate from tuberculosis has decreased from over 450 to about 75 per 10,000 of population and a large part of this decrease occurred before the tubercle bacillus was discovered. Other factors of which food is the most important have also been involved, but this decrease in the tuberculosis death rate is in the main due to the development of immunity in the population through exposure to infection. The extent to which anti-tuberculosis activities even today are preventing opportunities for infection is fairly well indicated by the fact that over 35 per cent of the fatal cases of tuberculosis in Boston do not become officially recognized until within a month of death. Wholesale physical examinations in Framingham and elsewhere indicate that in the thickly populated districts in this part of the country about 1 per cent of the people are spitting tubercle bacilli. Present day diagnostic facilities doubtless result in the detection of more people with active pulmonary lesions than formerly, but most of them still die in old age from some other cause and in ignorance of the fact that they have ever scattered tubercle bacilli about.

When we examine the old records of scarlet fever or diphtheria in Boston, we find a similar story. Both these diseases have steadily decreased in seriousness since they became endemic in Boston and vicinity instead of appearing as epidemic visitations. Deaths from diphtheria had greatly diminished in Boston before antitoxin came into use in the nineties and the prevalent type of scarlet fever suggests that we may be approaching the situation in Rio de Janeiro where scarlet fever once common is no longer seen in a recognizable form but immunity is shown by the Dick test.

It would seem most probable that if the present economic importance of colds and their complications is ever to be reduced, it will be by some such way of decreasing naturally or artificially the susceptibility of individuals to the causes of colds or to infection with secondary invaders.

It does not necessarily follow, however, that immunity can best be brought about by unrestricted exposure to infection. Exposure of children to a massive dosage of tubercle bacilli from actively diseased members of their families is usually fatal, but the dosage in which most of us have taken our tubercle bacilli in childhood has proved most beneficient and protective for life.

However developed, immunity to an infection is most often, if not always, relative rather than absolute. It is to be regarded practically as a degree of resistance which may be overcome. Cases of typhoid fever did occur among soldiers in the World War in spite of typhoid vaccination. In many such instances, the evidence indicated that the degree of protection given by vaccination was

overcome by a large intake of infective material. An old smallpox vaccination which is effective against a mild type of smallpox may fail to prevent infection from a virulent case.

Immunity may disappear. Fatal cases of smallpox do occur in persons pock marked from a previous severe case of the disease. Second attacks of typhoid fever and of measles are not very uncommon. The same may be said of other contagious diseases which need not be enumerated. A high degree of natural resistance virtually amounting to immunity to an infective agent may be lost in an individual as the result of some other infection or of some bodily change in which no infective process is involved.

An immunity apparently follows from recovery from a cold, but unlike the usual result of an infection with smallpox, measles or typhoid fever or diphtheria, the immunity conferred by cold is transitory. Therefore, unlike the diseases mentioned, colds do not appear to be providing their own solution as a serious health problem. It may be interesting, however, to note in this connection that available and somewhat dubious statistical data does not indicate that deaths from pneumonia are tending to increase in Boston.

The artificial protection of individuals seems to call for the development of a different sort of procedure from that which has proved successful in smallpox, typhoid fever or diphtheria. An immunity, or at least an increased resistance to colds, can often be produced in a person by preparing an autogenous vaccine from organisms conspicuously associated with the active stages of their colds, but the procedure even when successful is of limited practical value, for the protection afforded seems to last only a few months and probably less.

There is, however, another aspect of the situation which may indicate that artificial immunization to colds or to their complications may not be hopelessly impracticable.

Influenza is a disease in which second attacks even within a few months are not uncommon. Influenza, of itself, never kills a person in previous good health. Deaths occur from pneumonia caused by secondary infective invaders. Uncomplicated influenza presents no catarrhal symptoms. Yet during 1918, the year of the terrible influenza epidemic in Boston, there was a comparatively slight increase in deaths in persons over fifty years old as compared with preceding years and practically no increases at all in persons over sixty, thus indicating that some sort of a permanent protection to influenza or to its fatal complications had been acquired somehow by the older part of the population. As clinically observed, influenza was confined to persons under fifty.

Until the practical significance of some of the observations referred to in the foregoing are made clear, we cannot hope to do much with the broad economic problem presented by colds. There is, however, a possibility of accomplishing something under favorable local conditions by acting in the light of knowledge of the following facts.

Absence from industry arising from colds is due chiefly to certain kinds of potentially harmful organisms which have succeeded in invading somebody's respiratory tract because it was already diseased or abnormal from some cause.

Organisms of this character are distributed in the community both by persons whose respiratory tracts are abnormal and by those whose respiratory tracts are apparently normal.

Carriers of such organisms reach their maximum proportion in the community in this vicinity in early spring. Actual examinations have indicated that at that season 25 per cent or more of the population may be carrying organisms possibly harmful to others.

These organisms are distributed in the community by means of secretions thrown off through the noses or mouths of persons who may harbor such organisms.

The distributing capacity of an individual is directly proportional to the amount of secretion which he is throwing off.

Successful distribution is due largely to uncleanliness with respect to such secretions.

These organisms may be unavoidably transplanted through the air, but probably quite as much in such ways as by soiled handkerchiefs, contaminated hands and unsterilized eating and drinking utensils.

Disability resulting in absence from work might be prevented if we knew all about the causation of colds or conditions which make people vulnerable to the streptococci, pneumococci and other secondary invaders. Even as matters now stand, it may be reduced by measures which may serve to check the distribution in the community of organisms which are known to be capable of producing serious complications of colds.

SCARLET FEVER FREEDOM.

A patient who has suffered from scarlet fever is commonly believed to be free from danger, (1) when there is no longer evidence of inflammation or of catarrah of the nose or the throat, (2) when there is no discharge from the ears, (3) when all wounds and other open lesions have healed. In most cases these conditions will be found to be fulfilled by the time desquamation has ceased.

It is with a feeling of profound sorrow that we report the death of Stephen L. Maloney, secretary of the Boston Health Department, who was stricken in his office on October 11, and died from a heart affection soon after his removal to his home.

Stephen Lawrence Maloney was born in Boston on December 23, 1883. He attended the Frothingham School and English High School, from which he graduated in 1903. While at English High School, he won the much coveted Lawrence prize. He entered the Boston Health Department, as clerk, in 1895, serving in practically every division of the department, and was promoted to the position of secretary in 1912. During that time he took special courses in public health and sanitation given at the New York University and at the Harvard-Technology School of Public Health. He was a Fellow of the American Public Health Association and the Massachusetts Association of Boards of Health, of which latter organization he was sceretary at the time of his death. He held the rank of captain and adjutant in the reserve corps of the United States Army.

Mr. Maloney is survived by a widow and a daughter, four brothers and a sister.

There are very few in the State of Massachusetts who had a clearer knowledge of the practical workings and duties pertaining to public health than Mr. Maloney, and the gap which his taking off has created will be most difficult to fill.

DEDICATION OF THE FOURTH GEORGE ROBERT WHITE HEALTH UNIT.

The fourth health unit erected at the corner of Blue Hill avenue and Savin street, Roxbury, by funds devised by the late George Robert White, was formally dedicated on Tuesday, September 24, with clergymen, city officials and others participating.

The trustees of the fund are the Mayor of Boston, Malcolm E. Nichols, the President of the City Council, Timothy F. Donovan, the City Auditor, Rupert S. Carven, the President of the Chamber of Commerce, Henry I. Harriman, and the President of the Bar Association, Thomas W. Proctor.

George E. Phelan, the Manager of the White Fund, presided at the exercises. The invocation was delivered by the Rt. Rev. Patrick J. Supple, pastor of St. John's Church, Roxbury, and ad-

dresses were made by Health Commissioner F. X. Mahoney, Rabbi Herman H. Rubinovitz of Mishkan Tefila Synagogue, Roxbury, Mrs. Sadie Shulman, Assistant Corporation Counsel and Walter R. Means, President of the Roxbury Historical Society, and former Mayor James M. Curley.

The dedicatory address was by Dr. Charles F. Wilinsky, Director of the Beth Israel Hospital, and the benediction was delivered by the Rev. Arthur T. Brooks, pastor of the Dudley Street Baptist Church.

Presentation of the keys to the trustees was by Henry R. Shepley of Coolidge, Shepley, Bulfinch and Abbott, architects. Thomas W. Proctor, President of the Bar Association, presented the building to the city and Acting Mayor Timothy F. Donovan accepted for the city.

After the exercises there was a luncheon at the Ritz-Carlton Hotel attended by those who took part in the exercises.

The location was selected as being one which was most convenient to the greatest number of people of the community which it will serve.

The lot available for the purpose was a large one and is bounded on three sides by streets. The clearing of this lot has been of advantage to the community, providing, as it does, two large play yards for the children, as well as insuring plenty of light and air for the services maintained within the building.

The building is three stories high, with basement, and is located at the corner of Blue Hill avenue and Savin street, with the entrance on Savin street, away from the street cars, yet easily accessible. The exterior construction is of brick with limestone trimmings.

Entering from Savin street through a marble vestibule, we come into a hallway which connects the administration and the clinical activities of this floor. These activities are heliotherapy, dental, baby, prenatal and tubercular clinics and offices for the Health Department nurses who operate this clinic and minister to the needs of the community.

The basement contains a complete X-ray unit for fluoroscopy, radiography and treatment.

On the second floor will be found offices for the welfare organizations which operate in this district.

The third floor contains an auditorium and also space which has a glass roof and walls. This space is heated and will be used for conducting classes made up of pre-school age children selected from the community.

There is a kitchen for the preparation of the children's luncheon. The glass used in the room occupied by these children has the quality to pass all the health-giving rays of the sun.

WASH ALL FRUIT AND VEGETABLES.

The use of sprayed fruit and vegetables without washing is dangerous, and it is good sanitary practice to wash fruit and vegetables at all times. Besides possible danger from infective bacteria, fruit and vegetables, including lettuce and celery, may be accidentally contaminated by poisonous arsenate of lead used in sprays on adjoining trees and shrubs.

SUMMARY OF WORK, SEPTEMBER, 1929.

ADMINISTRATION DIVISION.

Legal notices	162	Personnel:	
Settlements:		Transfer	1
Total cases	153	Temporary appointments	2
Notices	131	Retirement	1
Bills	22	Promotions	4
Contract awarded	1	Temporary appointment extended	1
Trip authorized	1		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	857	Beverage	1
Denatured alcohol	11	Dump revoked	1
Hen licenses	21	Milk	128
Manicure-massages granted	97	Pedlers	57
Ice cream manufacturers	4	Certificates	8
Ice cream dealers	60	Undertakers	3

MEDICAL DIVISION.

Reported cases	704	Visits:	
Nonresidents	45	By V. D. investigator	262
Deaths investigated	18	By medical inspectors to cases of communicable disease	150

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	331
Tuberculosis	250
Typhoid	51
Gonorrhea	851
Gonorrheal ophthalmia	47
Syphilis	907
Other examinations*	160
Bacteriological examinations of milk	576
Bacteriological examinations of ice cream	101
Dark field	3
Genito urinary T. B.	12
Malaria	2

*Urines, 121; Vincent's angina, 10; paratyphoids, 2; urine for Eberthella typhi, 11; fæces for Eberthella typhi, 11; stools for organisms, 1; smear from mouth for organisms, 1; swab for meningitis, 1; smear from sinus for organisms, 1; smear from ear for organisms, 1.

Water from swimming pools examined for pollution, 64; water from beaches examined for pollution, 7.

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores during September, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as Certified Milk, or pasteurized as Certified Milk — Pasteurized.

All bacteria counts are made by the standard plate method of the American Public Health Association using beef extract agar adjusted to a pH of 6.6.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Standard Plate Count of Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.42	3.93	7,000
Antetomasso, Peter	12.51	4.05	13,000
Bancroft, Hugh *	13.16	4.25	16,000
Brandley, F. J. & P. J.	12.54	3.90	150
Casey, James	12.45	3.82	16,000
Cashin, J. F., & Co.	12.71	3.91	16,000
Cedar Hill Farm, Inc.	12.14	3.40	175
Chapin, George L.	12.46	3.78	14,000
Clark, Levi	12.23	3.78	12,000
Corkery, John J.	12.62	4.05	14,000
Cosgrove, Martin S.	12.74	4.03	10,000
Cummings, Francis S., Company	12.31	3.82	14,000
Daley, John	12.12	3.64	10,000
Dean, Louis W.*	13.62	4.38	14,000
Deerfoot Farms Company	12.62	3.95	10,000
Denehy, Timothy	12.54	3.80	14,000
Driscoll, William B., Company	12.59	3.94	10,000
Edgerly, Frank S.	12.66	4.20	11,000
Elm Spring Farm Company	12.42	3.79	21,000
Ferguson, Malcolm D.	12.43	3.78	37,000
Garvin, Charles E.	15.31	5.75	13,000
Giroux, J. E. & H. J.	12.55	3.88	13,000

Name of Dealer.	Solids.	Fat.	Standard Plate Count of Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Griffin, Joseph L.	13.24	4.40	18,000
Gushee, Chester W.	12.50	3.78	14,000
Hampden Creamery Company	12.26	3.47	18,000
Herlihy Brothers, Inc	12.38	3.86	43,000
Hickey, James B.	12.29	3.80	11,000
Holden, John E.	12.34	3.80	9,000
Hood, H. P., & Sons, Inc.	12.34	3.85	17,000
Jones, William T., Company	12.35	3.90	19,000
Kendall Brothers	12.42	3.78	5,000
Kingston Brothers	12.67	3.65	12,000
Knapp, George J.	12.52	3.80	20,000
Lang Brothers	12.24	3.70	12,000
Larsson, Charles	12.41	3.83	31,000
Lyndonville Creamery Association	12.52	4.08	12,000
Manning, Harriet	12.16	3.63	19,000
McAdams, J. F., & Brothers, Inc	12.82	4.08	13,000
McKernan, James	12.43	3.88	75,000
Munchback, Albert W.	12.44	3.63	10,000
New England Creamery Products Company *	12.71	4.17	9,000
Robinson, A. J.	13.23	4.28	13,000
Schuster, Adam	12.33	3.77	26,000
Seven Oaks Dairy Company	12.55	3.95	19,000
Shick, Jacob	12.37	3.67	15,000
Somerset Farms Creamery Company	13.29	4.58	16,000
Sterling Farms Milk Company	12.35	3.83	10,000
Stone, H. L.	12.38	3.75	8,000
Stuart, W. E., Company	12.18	3.80	8,000
Turner Centre System	12.45	3.85	13,000
United Farmers' Co-operative Creamery Association, Inc.	12.28	3.77	65,000
Walker-Gordon Laboratory Company †	12.91	4.40	100
Weiler, E., & Sons	12.51	4.00	46,000
Westwood Farms Milk Company	12.25	3.73	4,000
White Brothers	12.65	4.08	15,000
Whiting Milk Companies	12.35	3.87	13,000
Whittemore, W. D.	12.58	3.92	13,000
Williams, Edward C.	12.47	3.93	6,000
Wiswall, Granville A.	12.29	3.75	26,000
Woodland, Charles L.	12.51	3.95	14,000

* Milk from tuberculin tested cows.
† All cows tested and reported free from infectious abortion.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.35	3.88	15,000
Brown, M., & Sons.....	United Farmers' Co-operative Creamery Association.	12.76	4.11	12,000
Cloverdale Company, The.....	Turner Centre System.....	12.38	3.80	17,000
Economy Grocery Stores Corporation.	Whiting Milk Companies and Herlihy Brothers, Inc.	12.36	3.76	27,000
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	12.94	4.08	15,000
Morgan Brothers Company *...	New England Creamery Products Company.	12.77	4.09	19,000
Winer, M., Company.....	M. Winer Company.....	12.79	4.09	21,000

* Milk from tuberculin tested cows.

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies, an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Antetomasso, Peter.....	12.81	4.32	8,000
Cosgrove, Martin S.....	13.32	4.45	12,000
Cummings, Francis S., Company.....	12.75	4.10	8,000
Dean, Louis W.....	13.81	4.50	8,000
Elm Spring Farm Company.....	12.95	4.30	11,000
Griffin, Joseph L.....	13.36	4.50	6,000
Herlihy Brothers, Inc.....	12.84	4.40	14,000
Hood, H. P., & Sons, Inc.....	12.53	4.12	9,000
Jones, William T., Company.....	12.64	4.38	11,000
McAdams, J. F., & Brothers, Inc.....	12.93	4.43	9,000
Robinson, A. J.....	13.18	4.28	10,000
Seven Oaks Dairy Company.....	12.82	4.25	15,000
Sterling Farms Milk Company.....	13.08	4.35	8,000
Turner Centre System.....	13.47	4.55	12,000
Weiler, E., & Sons.....	12.55	4.18	30,000
White Brothers.....	13.16	4.55	8,000
Whiting Milk Companies.....	12.49	4.10	10,000
Woodland, Charles L.....	12.44	4.10	10,000

CERTIFIED MILK.

Raw milk produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.28	3.85	10,000
Hood, H. P., & Sons, Inc.	Own	13.38	4.32	4,200
New England Creamery Products Company.	Bellows Stock Farm	12.32	3.85	1,600
Turner Centre System	Alta Crest	12.63	3.95	3,000
Walker-Gordon Laboratory Co.*	Own	12.49	4.10	3,300
Whiting Milk Companies	Hampshire Hills	12.87	4.25	1,400

* All cows tested and reported free from infectious abortion.

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for Certified Milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	11.88	3.50	175
Hood, H. P., & Sons, Inc.	Own	12.91	3.95	250

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:	
Milk from wagons	385
Milk from stores	815
Vinegar	241
Water	3
Polishes	2
Miscellaneous examinations	2
Samples referred to Bacteriological Laboratory for examination:	
Milk	576
Ice cream	101
Court cases	23
Fines	$315

CERTIFIED MILK.

As a precaution against undulant fever, at its regular monthly meeting in July, 1929, the Medical Milk Commission of Boston, Inc., resolved to require that, not later than January 1, 1931, all milk certified as produced under its supervision be drawn from cows free from infectious abortion.

On October 1, 1929, the cows in the milking herd of one producer of certified milk, under the supervision of this commission, were reported as being free from infectious abortion. This achievement is especially important as proving, beyond all doubt, the practicability of the requirement adopted by the commission and the liberality of the time limit, January 1, 1931.

DAIRY DIVISION.

Total services	1,221	Total cattle inspected	11,745
Dairies inspected	747	Inspections of milk plants and licensed dealers	248
Scoring above 50 *	497	Bacteriological examinations	111
Scoring below	250	Country creamery inspections	2
With milk rooms	579	Sediment tests	97
Without milk rooms	168		
Inactive	12		

* Passable mark.

FOOD INSPECTION DIVISION.

SEPTEMBER, 1929.

District inspections	2,709		
Reinspections	319		
Market inspections	1,391		
Terminal inspections	416		
Vehicle inspections *	5,287		
Stand inspections	1,625		
Complaints	42		
Notices to abate	129		
Court case entered	1		
Fines	$25		
Samples taken	14		
Condemnations:			
Confectionery	153 pounds	Fish	450 pounds
Fruit	408 pounds	Meat	1,897 pounds
Groceries	8 pounds	Vegetables	4,250 pounds
Pedler Service:			
Numbers assigned	62		
Licenses certified	59		
Vehicles approved	638		
Licenses to remove bones	51		

* This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market.

ABATTOIR DIVISION.

Cattle inspected	3,279	Parts condemned	937
Calves inspected	3,902	Animals condemned	59
Swine inspected	3,458	Total of meat condemnations (pounds)	20,287
Sheep inspected	685		

SANITARY DIVISION.

Original inspections	2,189	Complaints investigated	679
Causes for action found	1,586	Nuisances abated	1,474
Reinspections	5,692	Routine inspections	2,170
Legal notices served	152		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	16	118	157	275	15	22	37
East Boston	12	72	120	192	11	15	26
North End	12	29	48	77	2	4	6
West End	12	25	42	67	4	4	8
South Boston	12	58	69	127	7	11	18
Boston Dispensary	8	13	9	22	5	2	7
Brighton	8	9	12	21	2	—	2
Charlestown	8	24	23	47	3	7	10
Codman square	12	65	62	127	8	1	9
Hyde Park	8	36	39	75	3	2	5
Fields Corner	4	10	15	25	2	1	3
Totals	112	459	596	1,055	62	69	131

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	33	16	76	140
East Boston	31	6	—	56
North End	5	1	—	58
West End	3	4	—	—
South Boston	34	8	24	78
Boston Dispensary	4	1	—	—
Brighton	—	—	—	—
Charlestown	7	1	—	—
Codman square	3	7	—	—
Hyde Park	18	4	—	—
Fields Corner	4	—	—	—
Totals	142	48	100	332

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING SEPTEMBER, 1929.

Classification.	Number.	Percentage.
After death	5	16.67
Seven days or less	3	10.00
Eight to fourteen days, inclusive	—	—
Fifteen to twenty-one days, inclusive	1	3.33
Twenty-two to thirty-one days, inclusive	1	3.33
Within First Month. (Total)	10	33.33
Within second month	4	13.33
Within third month	—	—
Within fourth month	—	—
Within fifth month	2	6.67
Within sixth month	—	—
Within seventh month	—	—
Within eighth month	—	—
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	1	3.33
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	17	56.66
Within second year	8	26.67
Within third year	1	3.33
More than three years	4	13.33
Grand totals	30	99.99

MONTHLY REPORT OF ADMISSIONS TO AND DISCHARGES FROM TUBERCULOSIS SANATORIUMS OF BOSTON CASES FOR THE MONTH OF SEPTEMBER, 1929.

Public Sanatoriums.	Admitted.	Discharged.
Boston Sanatorium	22	22
North Reading State Sanatorium	3	11
Lakeville State Sanatorium	2	6
Rutland State Sanatorium	3	7
Rutland Prison Camp	—	—
Westfield State Sanatorium	6	3
Tewksbury	1	—
Totals	37	49

Private Sanatoriums.	Admitted.	Discharged.
Doctor Lapham's Sanatorium	—	—
Doctor Crane's Sanatorium	1	4
Plymouth County Sanatorium	—	—
Totals	1	4

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, September, 1929.

Physical examinations	44
Toxin-antitoxin administrations	127
Vaccinations	1,769
Vaccination certificates issued	1,238
Anti-typhoid inoculations	9
Parochial school visits	10
Conferences	2

Report of Child Health Conferences, September, 1929.

NUMBER OF CONFERENCES AND ATTENDANCE.

Station.	Number of Babies.	Number of Pre-school (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	232	9	241	25	1	26	4	60
31 Lincoln street, Brighton	152	9	161	19	1	20	4	40
Charlestown Municipal Building	422	19	441	36	1	37	8	55
Codman Square Library	400	67	467	67	3	70	8	58
Columbia Road Municipal Building	477	27	504	63	3	66	8	63
1 Arcadia street, Dorchester	287	15	302	36	3	39	8	38
East Boston Health Unit	421	52	473	78	9	87	8	62
Hyde Park Municipal Building	219	28	247	39	3	42	8	31
Curtis Hall, Jamaica Plain	217	25	242	41	1	42	4	61
41 North Margin street	209	125	334	30	4	34	8	42
Roslindale Municipal Building	282	68	350	33	3	36	4	88
Children's Hospital	140	3	143	21	—	21	4	36
1049 Columbus avenue	305	14	319	47	3	50	8	40
Vine Street Municipal Building	365	17	382	52	2	54	8	48
133 Dorchester street, South Boston,	392	76	468	59	10	69	8	56
122 Tyler street	120	35	155	10	—	10	4	34
Shawmut Avenue Municipal Building,	183	27	210	17	—	17	4	52
57 East Concord street	173	3	176	21	—	21	4	44
17 Blossom street	323	60	383	19	2	21	8	48
Totals	5,319	679	5,998	713	49	762	136	50

TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	2	1	2	5	71
31 Lincoln street, Brighton	1	2	—	3	89
Charlestown Municipal Building	—	—	—	—	288
Codman Square Library	12	9	15	36	290
Columbia Road Municipal Building	11	6	1	18	236
1 Arcadia street, Dorchester	2	3	1	6	283
East Boston Health Unit	—	—	—	—	29
Hyde Park Municipal Building	4	5	3	12	118
Curtis Hall, Jamaica Plain	7	3	2	12	75
41 North Margin street	2	1	—	3	47
Roslindale Municipal Building	9	7	3	19	155
Children's Hospital	3	1	1	5	15
1049 Columbus avenue	—	—	2	2	337
Vine Street Municipal Building	—	1	1	2	358
133 Dorchester street, South Boston	5	2	1	8	59
122 Tyler street	2	3	2	7	46
Shawmut Avenue Municipal Building	3	7	9	19	28
57 East Concord street	—	—	2	2	16
17 Blossom street	—	—	—	—	26
Totals	63	51	45	159	2,566

DENTAL ACTIVITIES AT HEALTH UNITS.

SEPTEMBER, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	73	130	306	143	211	863
Number of treatments by dentists	102	116	270	121	212	821
Number of treatments by hygienist	9	54	118	44	72	297

Cases referred by: Parochial schools; public schools; T. B. roofs.

HEALTH UNIT ACTIVITIES.

SEPTEMBER, 1929.

BOSTON DISPENSARY:

Calls by district physician	62

BOSTON LYING-IN HOSPITAL:

Number prenatal clinics	15
Total attendance	183
New cases	35

COMMUNITY HEALTH ASSOCIATION:

Homes visited	8,081
Cases referred	379
Diseases reported	8
Number of meetings of mothers' club	162
Attendance	229

CHILDREN'S HOSPITAL:

Number of clinics	4
Attendance	13

BOSTON HEALTH DEPARTMENT:

Refraction Service:

Number of refractions	84
Glasses prescribed	10
New cases	30

NURSING SERVICE.

HOMES VISITED		12,263
CHILD HYGIENE:		
Visits to new cases	1,281	
Visits to old ones	8,832	
Total		*10,113

* Includes 132 wrong addresses; 952 not seen; 1,084 absent visits.

COMMUNICABLE DISEASES:		
Visits to new cases	311	
Visits to old cases	676	
Total		*987
TUBERCULOSIS:		
Visits to new cases	160	
Visits to old cases	4,060	
Total		†4,220
MISCELLANEOUS VISITS:		
Infant death investigations	59	
Maternal death investigations	4	
Day nurseries	16	
Visits to parochial schools	292	
Total		371
Total number of visits		15,691

	Hrs.	Mins.
Hours in station by nurses	3,062	20
Hours at baby and P. S. conferences	1,712	35
Hours at tuberculosis clinics	694	30
Total number of hours	5,469	25

* Includes 6 wrong addresses; 49 not seen; 54 absent visits; 187 ophthalmia visits were also made.
† Includes 38 wrong addresses; 464 not seen; 502 absent visits; 1,840 positive; 1,345 contacts and 533 suspect cases were also seen.

PREVENTIVE MEDICINE AND THE BABY.

When the baby is born, it is preventive medicine to impress the mother with the value of breast-feeding and to see that it is carried out in every possible instance, pointing out to the mother not only the advantages of the same, but the things which may be of influence on and benefit to lactation. If the baby is to be wholly or partially bottle-fed, what more presentable opportunity for preventive work is there than carefully supervising that very trying period of infant life, emphasizing the relative value of milk modification, cleanliness, sterilization, etc., avoiding thereby gastric disturbances with its chain of constipation, diarrhea, vomiting, acid stools, etc.

Every physician is not expected to be a skilled pediatrician, but he ought to be appreciative of fundamental principles which influence and govern child health.

VITAL STATISTICS, SEPTEMBER, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING SEPTEMBER, 1929, WITH COMPARATIVE FIGURES FOR SEPTEMBER, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	**732**	761	—29	**10.91**	11.43	—.52
Nonresidents deducted	**570**	610	—40	**8.49**	9.16	—.67
By Age:						
Under one year	**85**	104	—19	**1.27**	1.56	—.29
One year to four years, inclusive	**22**	24	—2	**.33**	.36	—.03
Sixty years and over	**295**	297	—2	4.39	4.46	—.07
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**30**	40	—10	**.45**	.60	—.15
Arteriosclerosis	**19**	21	—2	**.28**	.31	—.03
Heart disease	**129**	157	—28	**1.92**	2.36	—.44
Nephritis, chronic	**44**	42	+2	**.65**	.63	+.02
Infant and Maternal Mortality:						
a. Total registered live births *	**1,224**	1,188	+36	**18.24**	17.84	+.40
b. Registered stillbirths	**21**	34	—13	**.31**	.51	—.20
Stillbirths per 1,000 births and stillbirths †	—	—	—	**16.87**	27.82	—10.95
c. Deaths of mothers from causes incident to childbirth	**10**	8	+2	**.15**	.12	+.03
d. Deaths of mothers per 1,000 births and stillbirths †	—	—	—	**8.03**	6.55	+1.48
Deaths of children in first year of life	**85**	104	—19	**1.27**	1.56	—.29
Deaths in first year per 1,000 live births,†	—	—	—	**69.44**	87.54	—18.10
Violence:						
Accidents	**48**	40	+8	**.71**	.60	+.11
Homicides	**2**	3	—1	**.03**	.04	—.01
Suicides	**8**	9	—1	**.12**	.13	—.01
Miscellaneous:						
Alcoholism, acute or chronic	**6**	13	—7	**.10**	.19	—.09
Broncho-pneumonia	**31**	38	—7	**.46**	.57	—.11
Cancer	**97**	85	+12	**1.44**	1.28	+.16
Cirrhosis of the liver	**4**	3	+1	**.06**	.04	+.02
Diabetes mellitus	**17**	13	+4	**.25**	.19	+.06
Diarrheal diseases, children under two years of age	**19**	34	—15	**.28**	.51	—.23

* Subject to increase. † Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	6	40	—36	.10	.60	—.50
Deaths.	—	5	—5	—	—.07	—.07
Cerebrospinal meningitis.....Cases..	1	1	—	.015	.015	—
Deaths.	—	—	—	—	—	—
Diphtheria.....Cases..	57	42	+15	.85	.63	+.22
Deaths.	1	5	—4	.015	.07	—.055
Influenza.....Cases..	3	11	—8	.04	.16	—.12
Deaths	2	1	+1	.03	.015	+.015
Measles.....Cases..	19	18	+1	.28	.27	+.01
Deaths.	—	—	—	—	—	—
Pneumonia (lobar).....Cases..	39	41	—2	.58	.61	—.03
Deaths.	12	16	—4	.18	.24	—.06
Scarlet fever.....Cases..	96	72	+24	1.43	1.08	+.35
Deaths.	—	—	—	—	—	—
Tuberculosis (pulmonary).....Cases..	95	107	—12	1.41	1.61	—.20
Deaths.	30	47	—17	.45	.70	—.25
Tuberculosis (other forms).....Cases..	23	30	—7	.34	.45	—.11
Deaths.	2	7	—5	.03	.10	—.07
Typhoid fever.....Cases..	11	8	+3	.16	.12	+.04
Deaths.	3	—	+3	.04	—	+.04
Whooping cough.....Cases..	99	69	+30	1.47	1.04	+.43
Deaths.	3	5	—2	.04	.07	—.03

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

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When you have no further use for this Circular give it to someone else.

CITY OF BOSTON PRINTING DEPARTMENT.

1559

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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PASTEURIZED MILK.

The coincidence of the increasing proportion of pasteurized milk sold in Boston, Mass., and the decrease in the recorded mortality from gastroenteritis of children under two years of age, — years 1909 to 1928.

Gastroenteritis (inflammation of the stomach and intestines) has been credited in death certificates as being responsible for a large number of deaths in children under two years in Boston. During the past twenty calendar years death certificates have ascribed to this cause alone the deaths of 7,472 children under two years of age in Boston. This total includes only those deaths where gastroenteritis, or a disease similar to it but perhaps called by a different name, was given as the primary cause of death. The number of times in which gastroenteritis or other allied terms was given as a contributing factor in the cause of death is not definitely known for the period under consideration. It is safe to say, however, that the figure if it was available would be a large one.

The close relationship between deaths from gastroenteritis and the unclean condition of the milk supply is well recognized. Undoubtedly the greatest single factor in determining the downward trend of deaths from this cause was the increasing amount of pasteurized milk used in Boston from year to year during this twenty-year period.

A study of the accompanying charts will show that beginning with the year 1912 a downward tendency is to be noted in the deaths from gastroenteritis and that this decrease came about just after the increase in the amount of pasteurized milk was noted. This increase was from about 49.9 per cent to 73 per cent of the total milk consumption for the city. Thereafter until 1923 the decreased deaths from gastroenteritis remained fairly constant, with but few exceptions, with the increased percentage of pasteurized milk.

From 1924 to 1927 the death from gastroenteritis increased slightly while the percentage of milk pasteurized remained practically the same; varying from 97 per cent in 1924 to 99 per cent in 1927. During 1928 the deaths decreased by 21 while the percentage of milk pasteurized was still about 99 per cent.

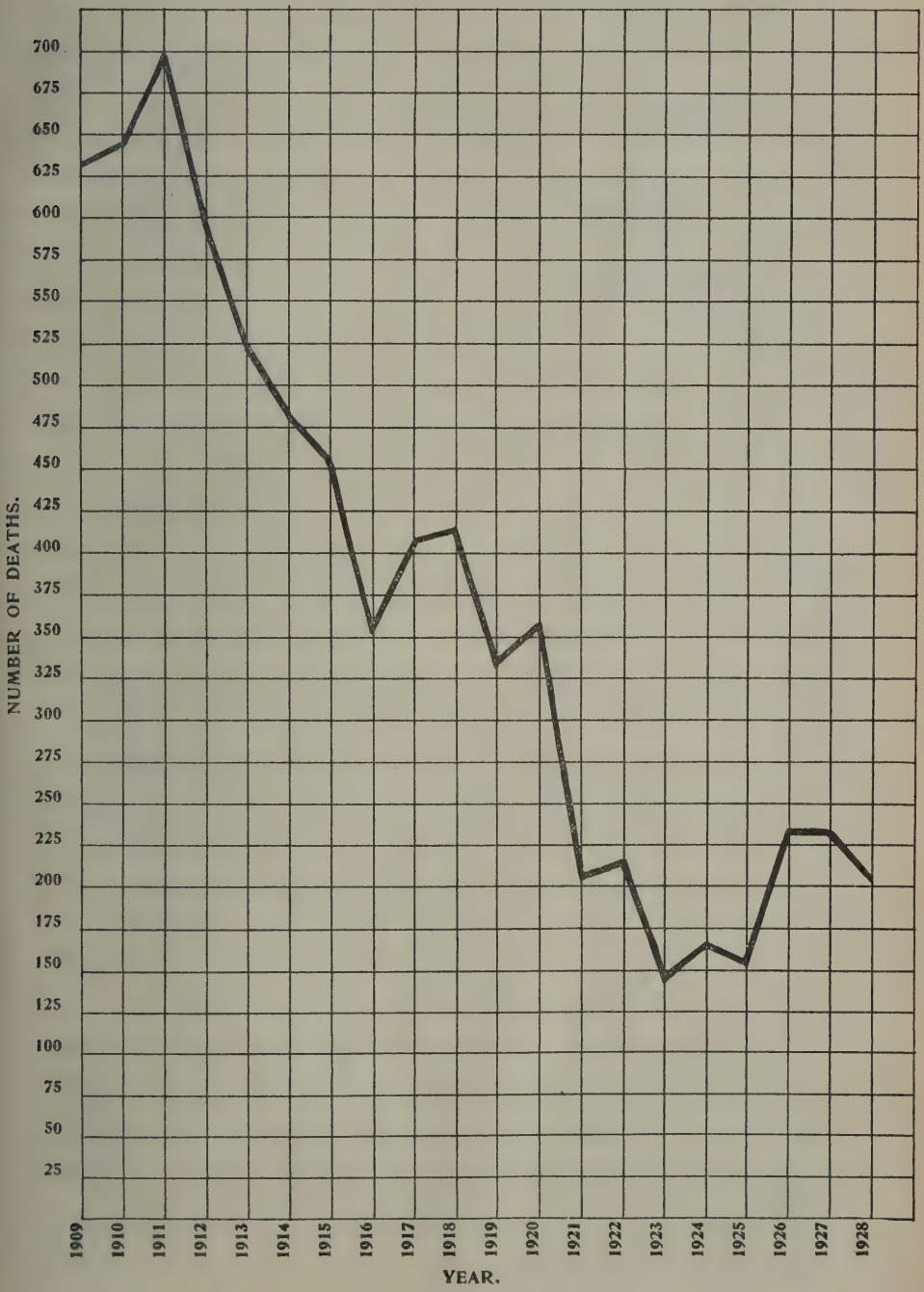
There is ample evidence to prove that milk pasteurization was the outstanding factor in this reduction of deaths from gastroenteritis. Credit for this reduction must also be given to the education of the milk producer and milk dealer in improved sanitary methods for handling milk; for example,—sanitary inspection of dairy farms, milk depots, etc., in the case of the producer and on the part of the dealer the practical elimination of the "dip tank" method, the introduction and standardization of individual bottles, sanitary caps, better refrigeration, etc.

Furthermore the dealer has received an increased return for his product which enables him to procure modern utensils and safeguards for his milk. This has been supplemented by bacteriological and chemical examinations by the Health Department to assure the public of constant protection of this most valuable food product.

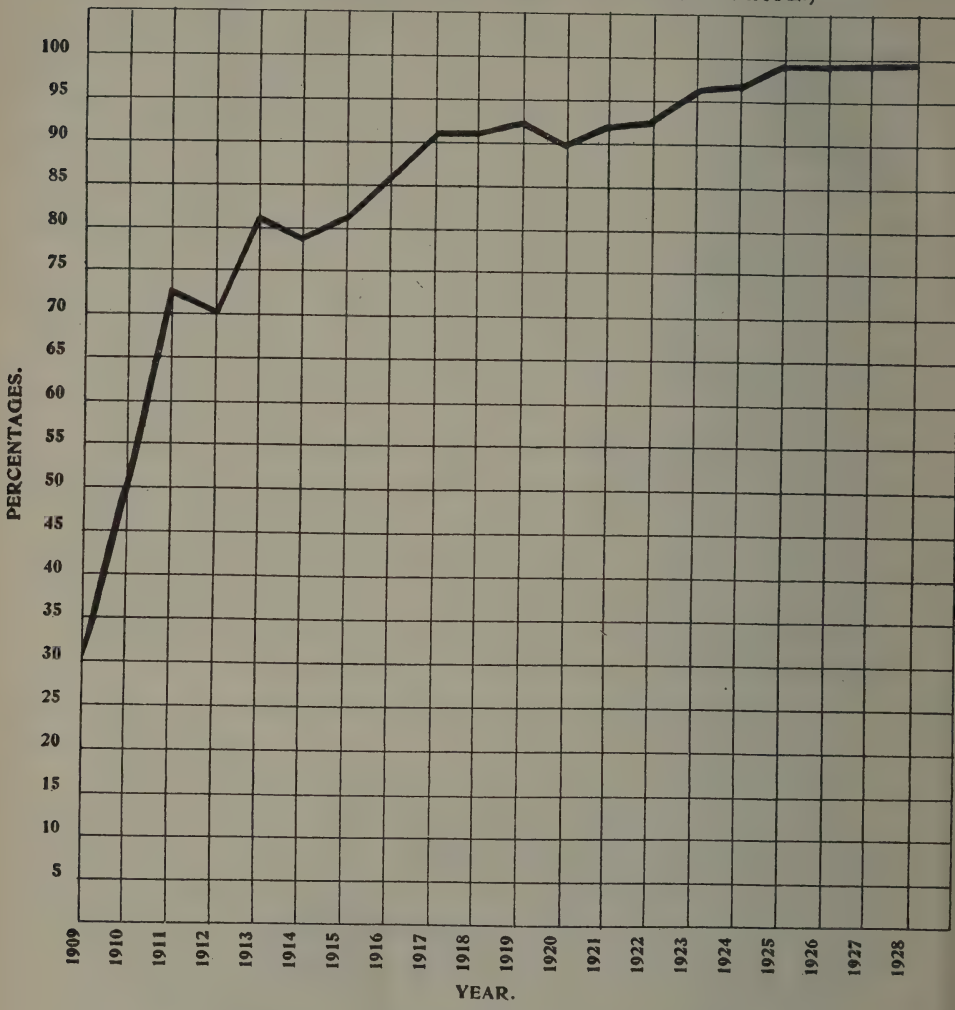
The public health programs reaching into the household have had a pronounced influence on the safeguarding of milk in the home, emphasizing the necessity for keeping milk at a proper temperature. and keeping it clean and free from contamination by foreign matter, flies, etc.

These improved standards together with pasteurization, Boston's milk supply being now nearly 100 per cent pasteurized, are the answer to the gratifying downward tendency shown by the charts which accompany this article.

DEATHS FROM DIARRHEA AND ENTERITIS UNDER TWO YEARS IN BOSTON, MASS., RESIDENTS AND NONRESIDENTS. YEARS 1909 TO 1928, INCLUSIVE.



PERCENTAGES OF MILK PASTEURIZED IN BOSTON, MASS., YEARS 1909 TO 1928, INCLUSIVE. (PERCENTAGES APPROXIMATE.)



GENERAL INSPECTION OF BAKERIES.

During the month of October the semiannual general inspection of all manufacturing bakeries in Boston was begun. To date, more than four hundred bakeries have been carefully examined. Eighty-four notices to correct defects observed were served by the food inspectors of this department. In most of the cases the defective condition noted consisted of a lack of cleanliness and good order. Each proprietor will be closely followed up in order to make certain that the notices are complied with.

UNDULANT FEVER PREVALENT.

Undulant fever was made a notifiable disease in Ohio in July, 1928. Since that date sixty-two cases, with four deaths, have been officially reported. These cases, scattered in virtually every section of the state, prove how widespread *B. abortus* infection is among the cattle in Ohio. By far the greatest number of cases have been found in small towns, villages, and the rural districts, and among users of raw milk.

Just why undulant fever is not more prevalent among consumers of raw milk from herds known to be infected, no one can say. It may be that the strain of *B. abortus* is of a low degree of infectivity, and only those succumb who are particularly susceptible, or it may be that a majority of these raw milk consumers have developed immunity from previous light and unrecognized attacks of the disease.

Why it is that children, who are the chief milk consumers, are so seldom affected, is unknown. In a recent investigation of thirty-five cases, it was found that the age group of greatest incidence was between ages thirty and thirty-nine, while not a single case was found under ten years of age.

The outstanding features in early diagnosis seem to be these: (1) In the physical examination of many of these cases *there is nothing characteristic to be found,* and, (2) that an unexplained fever with no striking localized signs calls for a consideration of undulant fever.

Two of these thirty-five cases were operated, one for gallstones, and the other for appendicitis, before the real nature of the illness was discovered.

This all means that in any obscure case a specimen of blood, collected as for the Wassermann test, should be submitted for laboratory examination.— *Ohio Health News,* October 15, 1929.

CASES OF DIPHTHERIA IN THE WORLD.

The 1927 report of the League of Nations gives the following interesting résumé of the diphtheria situation throughout the world:

	1925.	1926.	1927.
United States of America	96,973	93,425	106,192
England	47,720	51,069	52,011
Russia in Europe	41,552	42,512	45,512
Germany	37,767	30,302	33,542
Russia Ukraine	19,330	23,602	24,218
Italy	15,383	14,923	18,879
Japan	13,858	13,644	15,211
France	12,096	13,348	14,289

WHAT NEXT?

Oatmeal and other cereals are suspected of harboring an "anti-vitamin" which, when too much cereal is eaten, can counteract the effects of vitamin D and cause rickets even when an otherwise adequate diet is being eaten. Most scientists have concluded that vitamin D, which is found in fats, notably cod liver oil, can prevent rickets, the disease that causes faulty bone formation, with the familiar bowed legs and bulging foreheads in infants and children. This disease has been considered due to poor nutrition and principally to a lack of vitamin D in the diet. However, recent experiments with cereals show that rickets is not purely a result of too little vitamin D, but is primarily due to a lowering of the amount of calcium in the blood, Dr. L. Mirvish of the University of Cape Town Medical School has reported to the scientific magazine "Nature."

The presence of rickets-producing "anti-vitamins" in cereals, chiefly oatmeal and wheat, was first indicated by experiments by Prof. Edward Mellanby of Sheffield University, England, who called the substances "toxamins." Following this lead, Doctor Mirvish extracted the "anti-vitamin" substance from oatmeal and injected it into rabbits. He found that the calcium in the blood was lowered as a result of these injections. This bore out and explained the work of other investigators who found that rickets can be induced in young animals by feeding them an excess of cereals or by adding extracts of cereals to a diet which did not produce rickets in control animals.

Rickets may prove to be a sign of under activity of two small glands in the neck known as the parathyroids, and thought by some authorities to have an important relation to the supply of calcium in the blood, Doctor Mirvish suggests. "If that is the case, our present conception of the role of vitamin D and probably of the other vitamins will have to change very appreciably," commented Doctor Mirvish.

— *Special London dispatch to the Boston Transcript.*

ROCKEFELLER FOUNDATION DISBURSEMENTS.

During the year 1928 the Rockefeller Foundation disbursed $28,435,792. Of this amount there was $17,266,153 spent for medical education and $3,042,339 for public health work. It is the rule of the Foundation not to make expenditures for the latter purpose except where the cooperation of a stable political government is assured, both with respect to assisting in the conduct of the work and sharing in the expense.

SMALLPOX CASES IN THE WORLD.

There were no cases of smallpox reported during 1927 from Cuba, Belgium, Netherlands or Switzerland. Some of the other nations did not fare as well. The following data on smallpox cases in 1927 comes from the report of the League of Nations for that year:

	1925.	1926.	1927.
India	177,530	221,156	213,315
United States of America	29,450	33,392	36,709
England and Wales	5,365	10,146	14,767
Russia	10,927	9,946	10,270
Germany	24	7	4
United South Africa	71	115	60

MANAGING DIRECTOR APPOINTED.

Dr. Clarence Cook Little, formerly President of the University of Michigan and now in charge of the Roscoe B. Jackson Memorial Laboratory for Cancer Research at Bar Harbor, Maine, has been appointed Managing Director of the American Society for the Control of Cancer. The choice of Doctor Little for this important position was made by the Executive Committee of the society, representing a board of thirty directors, which includes the leading cancer experts of the country.

Doctor Little brings unusual qualifications to his new and difficult task of directing the activities of the leading organization in the world devoted to the advancement of the knowledge and control of cancer, which now contests with tuberculosis the distinction of being the chief cause of death.

MADAME CURIE VISITS THIS COUNTRY.

Madame Marie Curie, co-discoverer of radium and the world's most distinguished woman scientist, arrived in New York, October 15, to pay her second visit to the United States.

Madame Curie came to this country for the purpose of accepting three invitations. These were to attend Henry Ford's dinner in Detriot to Thomas A. Edison, held October 21 in connection with the observance of the Jubilee of Light; to dedicate the Hepburn Hall of Chemistry at St. Lawrence University, Canton, New York, on October 25; and to be the guest of honor at the third annual dinner of the New York City Committee of he American Society for the Control of Cancer, at the Plaza Hotel, on the evening of October 31.

BAD TASTES IN MILK.

Complaints are frequently made of bad tastes in milk, and the taste that is perhaps most often found objectionable is variously described as an "old taste," a "cardboard taste," a "metallic taste," and these descriptions apparently refer to the same condition. Complainants invariably blame the milkman when, as a matter of fact, the blame usually lies against the complainant himself. The season of the year is here when housewives, in order to economize on ice, attempt to keep milk cool by placing it outdoors, or perhaps in a window, in order to get the cooling effect of outdoor air. This procedure usually results in exposing milk to the action of light, and light is a powerful chemical agent. It has been abundantly demonstrated that either diffused light, in spots where the direct sunlight never enters, as well as the more powerful direct rays of the sun, rapidly bring about chemical changes in the composition of the milk fat and these chemical changes in the fat are responsible for the tastes complained of. Milk should never be exposed to light any longer than absolutely necessary. Keep milk in dark places. If the cold outdoor air is relied on to keep milk cold, the milk should be so covered as to exclude light. Avoid exposing milk to light and it will taste better.

WHICH WORKERS HAVE GOOD ATTENDANCE.

Objective studies of absenteeism in a large department store which has had the advantage of a psychiatrist on its personnel staff should prove of interest. Doctor Ho, of the R. H. Macy & Co., New York City, finds the causes of lateness and absenteeism in such factors as age, marital status, sex and personality. He comes to the following conclusions:

1. The older the worker the less likely he is to be late and absent, but the more sick absences he tends to have.

2. Married people tend to be more regular in attendance than the single or widowed.

3. Women are more frequently late and absent than men, but have fewer sick absences of long duration.

4. Those who have personality difficulties of one form or another have, in general, poorer attendance than those who are free from them.

5. Women who have home problems have more lates, absences and sick absences than those who are without them. But with men, home problems seem to have a tendency to decrease their lates and absences.—*The Personnel Journal*, February, 1929.

SOME PARASITIC DISEASES THAT MAY BE TRANSMITTED BY DOGS AND CATS.

Cats and dogs are subject to various parasites which may attack human beings.

The two most important parasitic diseases transmitted to man by dogs in North America are hydrophobia, or rabies, and hydatid disease; and of these, hydrophobia is the more serious.

Mad dogs, and, less frequently, mad cats, can by their bite transmit hydrophobia to human beings. Hydrophobia does not develop in a dog unless that particular dog has been bitten by some other animal which has the disease. Generally, therefore, pet dogs are not likely to transmit the disease. If, however, a pet dog is bitten by a street dog it must be regarded as in danger of developing the disease for at least six months.

Hydatid disease is a serious problem in some countries where dogs are numerous and live intimately with people. Dogs and, more rarely, cats have in their intestine a small tapeworm, usually less than a quarter of an inch long. This tapeworm produces eggs which the dog scatters around the field. When these eggs are swallowed by pasturing cattle, sheep, or swine, the embryo breaks loose from the egg shell and bores to the liver, lungs, or some other portion of the body of the pasturing animal. It then develops into a cyst which may grow to be as large as a man's fist or even larger. In this cyst numerous tapeworm heads form; and when the cyst, discarded at some country slaughterhouse, is eaten by a dog, each tiny worm head develops into a small tapeworm. If, by chance, eggs from the dog-tapeworm are swallowed by persons, either through too great an intimacy with dogs or through the medium of contaminated food, man contracts the cyst, or hydatid, which is more usually found in cattle, sheep, or swine. Dogs and cats which have no opportunity to eat the infected organs of other animals do not harbor the tapeworm, and, therefore, cannot transmit hydatid disease.

In some parts of the United States both cats and dogs harbor a special intestinal parasite known as the Brazilian hookworm. This same hookworm is occasionally reported as an intestinal parasite of man, but the worm has gained special disrepute as cause of a skin disease of man. In some of the warmer localities there is a condition known as creeping eruption. Not only is this a very irritating condition, but its presence in certain localities has been an economic factor in driving away tourists and in decreasing real estate values. Creeping eruption in man can be caused by various different immature worms and by larval insects. The ill-famed creeping eruption of warmer localities in the United States is due

to the fact that if a person comes in contact with soil, as in the garden, which has become contaminated by dogs or cats with young larvæ of the Brazilian hookworm, the young worms penetrate the human skin and produce creeping eruption.

Among the less important parasites of dogs transmissible to man may be mentioned a tapeworm and the so-called tongue worm.

Cats may have a skin disease caused by a mite which is closely allied to the parasite which causes itch in persons. This cat parasite may pass from cats to persons, especially to children, and cause a special form of itch. Sometimes this cat itch becomes almost epidemic among the children in orphanages, but it is a rare condition in the general population.— *Taken from Health News, United States Public Health Service,* October 1, 1929.

THE TORONTO DAIRY EXPOSITION.

The Fourth Dairy Industries Exposition, which was held during the week of October 21 in the Royal Coliseum at Toronto, has passed into history. Upwards of two hundred and sixty machinery supply and service companies exhibited their wares to the throngs of interested visitors. The exhibiting members of the Dairy and Ice Cream Machinery and Supplies Association had spared no expense in their endeavor to make this exposition a noteworthy one. Visitors from the International Association of Ice Cream Manufacturers and the International Association of Milk Dealers, who were in convention in Toronto during the week, were privileged not only to see the very latest improvements in machinery, method and accessory but to have every phase of operation or use explained by the manufacturer's experts.

The daily convention program on the Ice Cream Manufacturers, October 21 to 23, and the Milk Dealers, October 24 to 26, were carried out according to schedule. It is reported that the attendance at the various sectional meetings of the Milk Dealers Association was larger than ever before, and that the many papers presented proved of greatest interest and benefit.

A fitting climax to the week was the banquet held Saturday evening in the large convention Hall of the Royal York Hotel, in charge of the Toronto Milk Dealers. The speaker of the evening was the eminent Scottish journalist, Sir James Alexander. Following the banquet a ball was given in the beautiful Grand Ball Room of the hotel.

— *New York Produce Review and American Creamery,*
October 30, 1929.

NOTICE TO DEALERS IN CREAM.

On April 27, 1929, an "Act Relative to Standards and Grades of Cream," chapter 267, Acts 1929, amending chapter 94, General Laws, sections 12 and 21, was approved. This law is effective on October 1, 1929.

The following standards and grades of cream are established thereby:

Light cream, not less than 16 per cent of milk fat.

Medium cream, not less than 25 per cent of milk fat.

Heavy cream, not less than 34 per cent of milk fat.

Extra heavy cream, not less than 38 per cent of milk fat.

Cream, or ungraded cream, not less than 16 per cent of milk fat.

You are to understand that in order to satisfy this law you shall, on and after October 1, 1929, see to it that all cream bears upon a label, cap, or tag, in legible, bold-faced letters of not less than twelve-point (that is to say, in letters not less than one sixth of an inch in height) the grade of the cream in the package so labeled, capped, or tagged as follows:

"Light Cream"
or "Medium Cream"
or "Heavy Cream"
or "Extra Heavy Cream"
or "Ungraded Cream."

. . . . . .

Or "Cream," this type of designation also bearing the percentage of milk fat contained therein, which shall be not less than 16 per cent.

Penalties provided for a violation of the above law are:

First offence — not more than $50.

Second offence — not less than $50 nor more than $100.

Third offence — not less than $100 nor more than $200.

NOTES.

Moderate exercise in the open air will promote bodily vigor and help to prolong life.

"An ounce of prevention is worth a pound of cure" is an old and trite proverb, and one to which we should aim to conform in our daily lives.

Disease is the nation's greatest burden.

Sickness lowers earning capacity.

Keeping the hands clean and away from the mouth will help greatly in preventing disease.

SUMMARY OF WORK, OCTOBER, 1929.

ADMINISTRATION DIVISION.

Legal notices	149	Hearings, alleys	2
Prosecutions	4	Personnel:	
License application refused	1	Leave of absence	1
Settlements:		Retirement	1
Total cases	127	Permanent appointment	1
Notices	89	Death of employee	1
Bills	38		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,025	Ice cream dealers	58
Denatured alcohol	51	Ice cream manufacturers	4
Hen licenses	19	Milk	125
Manicure-massage granted	165	Pedlers	32
Dump	1	Pedlers' certificates	6
Grease	1	Garbage transportations	2
Oleomargarine	6	Pasteurization, milk	23

MEDICAL DIVISION.

Reported cases	1,139	Visits:	
Nonresidents	59	By V. D. investigator	418
Deaths investigated	25	By medical inspectors to cases of communicable disease	370

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	777
Tuberculosis	355
Typhoid	48
Gonorrhea	896
Gonorrheal ophthalmia	63
Syphilis	1,172
Other examinations *	297
Bacteriological examinations of milk	659
Bacteriological examinations of ice cream	232
Dark field	7
Genito urinary T. B.	26
Malaria	4

* Urines, 221; Vincent's angina, 9; paratyphoids, 2; smears for organisms, 2; urine for Eberthella typhi, 30; faeces for Eberthella typhi, 30; sputum for pneumococci, 1; rat for infection, 1.

EFFECT OF VITAMIN DEFICIENCY ON COURSE OF TUBERCULOSIS.

Hagedorn states that, in rats on a diet containing insufficient vitamins, the generalization of inoculation tuberculosis occurs earlier and the resulting lesions are more extensive than they are in rats on a diet containing sufficient vitamins. The effects of vitamin A deficiency and of vitamin C deficiency are approximately the same but the effects of vitamin B deficiency are less marked.

— *Beiträge zur Klinik der Tuberkulose, Berlin.*

FOOD DIVISION.

MILK INSPECTION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is the result of a survey made of milk sold in Boston by wagon dealers and chain stores during October, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as certified milk, or pasteurized as certified milk — pasteurized.

All bacteria counts are made by the standard plate method of the American Public Health Association, using beef extract agar adjusted to a pH of 6.6.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent of milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Standard Plate Count of Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.62	3.80	16,000
Antetomasso, Peter	12.71	4.00	12,000
Bancroft, Hugh *	13.65	4.60	6,000
Brandley, F. J. & P. J.	12.60	3.90	300
Buxton, William E.	12.91	4.22	32,000
Casey, James	12.68	3.98	28,000
Cashin, J. F., & Co	12.55	3.93	18,000
Cedar Hill Farm, Inc	12.84	3.85	10,000
Chapin, George L.	12.62	3.95	17,000
Clark, Levi	12.32	3.93	11,000
Corkery, John J.	12.77	4.13	13,000
Cosgrove, Martin S.	13.39	4.75	15,000
Cummings, F. S., Company	12.38	3.84	15,000
Daley, John	12.78	4.17	13,000
Dean, Louis W.*	13.58	4.35	16,000
Deerfoot Farms Company	12.69	3.99	11,000
Denehy, Timothy	12.70	3.98	11,000
Driscoll, William B., Company	12.67	3.95	15,000
Edgerly, Frank S.	13.01	4.20	12,000
Elm Spring Farm Company	12.37	3.88	17,000
Ferguson, Malcolm D.	12.67	3.95	21,000
Garfield, Mason	15.00	5.73	9,000

* Milk from tuberculin tested cows.

Name of Dealer.	Solids.	Fat.	Standard Plate Count of Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Garvin, Charles	14.19	5.68	7,000
Giroux, J. E. & H. J.	12.48	3.87	15,000
Griffin, Joseph L.	12.67	3.85	29,000
Gushee, Chester W.	12.72	3.90	14,000
Hampden Creamery Company	12.68	3.79	18,000
Herlihy Brothers, Inc.	12.48	3.79	22,000
Hickey, James B.	12.43	3.90	11,000
Holden, John E.	12.49	3.84	18,000
Hood, H. P., & Sons, Inc.	12.42	3.87	16,000
Jones, William T., Company	12.74	4.10	17,000
Kendall Brothers	12.43	3.85	10,000
Kingston Brothers	12.70	4.05	13,000
Knapp, George J.	12.64	3.79	21,000
Lang Brothers	12.47	3.86	14,000
Larsson, Charles	12.68	3.95	20,000
Lyndonville Creamery Association	12.90	4.15	8,000
Manning, Harriet	12.31	3.73	12,000
McAdams, J. F., & Brothers, Inc.	12.73	3.93	13,000
McKernan, James	12.88	4.00	20,000
Munchback, Albert W.	12.28	3.62	10,000
New England Creamery Products Company *	12.84	4.12	9,000
Robinson, A. J.	13.08	4.20	12,000
Schuster, Adam	12.44	3.88	18,000
Seven Oaks Dairy Company	12.64	3.92	10,000
Shick, Jacob	12.54	3.75	12,000
Somerset Farms Creamery Company	12.90	4.05	12,000
Sterling Farms Milk Company	12.43	3.75	15,000
Stone, H. L.	12.49	3.95	12,000
Stuart, W. E., Company	12.70	3.95	6,000
Turner Centre System	12.56	3.93	13,000
United Farmers' Co-operative Creamery Association, Inc.	12.98	4.19	10,000
Walker-Gordon Company †	12.74	4.10	100
Weiler, E., & Sons	12.83	4.06	27,000
Westwood Farms Milk Company	12.55	3.89	31,000
White Brothers	12.61	3.87	13,000
Whiting Milk Companies	12.45	3.85	13,000
Whittemore, W. D.	13.38	4.15	13,000
Williams, Edward C.	13.05	4.33	8,000
Wiswall, Granville A.	12.54	3.93	16,000
Woodland, Charles L.	12.60	3.90	16,000

* Milk from tuberculin tested cows.
† All cows tested and reported free from infectious abortion.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.36	3.88	17,000
Brown, M., & Sons.....	United Farmers Co-operative Creamery Association	13.04	4.25	20,000
Cloverdale Company, The.....	Turner Centre System.....	12.40	3.78	14,000
Economy Grocery Stores Corporation.	Herlihy Brothers, Inc.....	12.53	3.88	12,000
First National Stores, Inc.....	Bellows-Falls Co-operative Creamery.	13.22	4.32	19,000
Morgan Brothers Company *....	New England Creamery Products Company.	13.01	4.25	23,000
Winer, M., Company.....	M. Winer Company.....	13.38	4.75	18,000

* Milk from tuberculin tested cows.

GRADE A MILK — PASTEURIZED.

Massachusetts law requires not less than 4 per cent milk fat; production from Grade A dairies, an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Antetomasso, Peter.....	13.05	4.33	8,000
Cosgrove, Martin S.....	13.53	4.68	25,000
Cummings, F. S., Company.....	12.53	4.00	18,000
Dean, Louis W.*.....	13.63	4.30	22,000
Elm Spring Farm Company.....	12.81	4.35	10,000
Griffin, Joseph L.....	13.14	4.43	8,000
Herlihy Brothers, Inc.....	13.00	4.40	8,000
Hood, H. P., & Sons, Inc.....	12.68	4.21	10,000
Jones, William T., Company.....	13.17	4.40	6,000
McAdams, J. F., & Brothers, Inc.....	12.88	4.40	9,000
Robinson, A. J.....	13.55	4.58	17,000
Seven Oaks Dairy Company.....	13.10	4.23	13,000
Sterling Farms Milk Company.....	12.93	4.25	10,000
Turner Centre System.....	13.62	4.60	12,000
Weiler, E., & Sons.....	13.04	4.29	25,000
White Brothers.....	13.18	4.48	12,000
Whiting Milk Companies.....	12.68	4.18	14,000
Woodland, Charles L.....	13.07	4.30	14,000

* Milk from tuberculin tested cows.

CERTIFIED MILK.

Raw milk produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own.	12.89	4.40	2,700
Hood, H. P., & Sons, Inc.	Own.	13.51	4.38	1,500
New England Creamery Products Company.	Bellows Stock Farm.	13.83	4.80	4,000
Turner Centre System.	Alta Crest.	12.77	4.10	7,400
Walker-Gordon Laboratory Co.*	Own.	12.70	4.20	3,500
Whiting Milk Companies.	Hampshire Hills.	12.82	4.25	2,200

* All cows tested and reported free from infectious abortion.

CERTIFIED MILK—PASTEURIZED.

The standards before pasteurization to be the same as for certified milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own.	12.58	3.85	150
Hood, H. P., & Sons, Inc.	Own.	13.18	4.30	150

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:	
Milk from wagons	390
Milk from stores	822
Milk brought by citizen	1
Vinegar	384
Water	7
Miscellaneous examinations	3
Samples referred to Bacteriological Laboratory for examination:	
Ice cream	232
Milk	659
Court cases	19
Fines	$220

DAIRY DIVISION.

Total services	1,566	Total cattle inspected	11,345
Dairies inspected	716	Inspections of milk plants and licensed dealers	185
Scoring above 50*	551	Bacteriological examinations	353
Scoring below	165	Country creamery inspection	1
With milk rooms	595	Sediment tests	293
Without milk rooms	121		
Inactive	18		

* Passable mark.

FOOD INSPECTION DIVISION.

OCTOBER, 1929.

District inspections	3,145
Reinspections	476
Market inspections	1,252
Terminal inspections	331
Vehicle inspections *	5,329
Stand inspections	1,602
Complaints	46
Notices to abate	167
Court case entered	1
Condemnations	7,198 pounds
Samples taken	26
Pedler Service:	
Numbers assigned	31
Licenses certified	28
Vehicles approved	515
Licenses to remove bones	44

* This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market.

SLEEP.

The amount of sleep required varies with the individual. Any average requirement of sleep will apply to different individuals according to their physical and mental needs. Generally speaking, however, an adult needs from seven to eight hours of sleep. Children require more. No person can be healthy who does not get a sufficient amount of refreshing sleep. The individual who gets the proper amount of sleep is best able to free himself of the waste products of the nervous system and to build up nerve cells for the work of the day. The normal individual should fall asleep within a short time after going to bed. It is well to regulate sleeping hours so that one goes to sleep more or less at a fixed hour each night, sleeps enough, and rises at about the same time each morning.

Freedom from worry, anxiety and trouble will give you the ability to relax mentally and physically, and enable you to sleep soundly and well.

ABATTOIR DIVISION.

Cattle inspected	3,722	Parts condemned	1,324
Calves inspected	4,210	Animals condemned	80
Swine inspected	4,172	Total of meat condemnations (pounds)	25,129
Sheep inspected	339		

SANITARY DIVISION.

Original inspections	2,129	Complaints investigated	549
Causes for action found	1,751	Nuisances abated	1,783
Reinspections	6,613	Routine inspections	2,479
Legal notices served	127		

TUBERCULOSIS DIVISION.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	13	125	127	252	23	37	60
East Boston	13	79	119	198	9	27	36
West End	12	46	48	94	5	—	5
North End	13	41	56	97	1	4	5
South Boston	13	83	64	147	18	27	45
Boston Dispensary	9	11	11	22	5	4	9
Brighton	8	14	12	26	4	3	7
Charlestown	10	22	34	56	2	11	13
Codman square	13	56	26	82	9	5	14
Hyde Park	10	86	64	150	9	12	21
Fields Corner	5	21	34	55	3	10	13
Totals	119	584	595	1,179	88	140	228

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	39	19	133	109
East Boston	30	8	—	59
West End	5	3	—	34
North End	10	—	—	—
South Boston	40	13	81	95
Boston Dispensary	5	—	—	—
Brighton	4	—	—	—
Charlestown	11	1	—	—
Codman square	18	6	—	—
Hyde Park	8	3	—	—
Fields Corner	16	2	—	—
Totals	186	55	214	297

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING OCTOBER, 1929.

Classification.	Number.	Percentage.
After death	7	12.96
Seven days or less	9	16.67
Eight to fourteen days, inclusive	2	3.70
Fifteen to twenty-one days, inclusive	2	3.70
Twenty-two to thirty-one days, inclusive	2	3.70
Within First Month. (Total)	22	40.73
Within second month	5	9.26
Within third month	4	7.41
Within fourth month	1	1.85
Within fifth month	1	1.85
Within sixth month	—	—
Within seventh month	1	1.85
Within eighth month	—	—
Within ninth month	1	1.85
Within tenth month	2	3.70
Within eleventh month	1	1.85
Within twelfth month	1	1.85
Within First Year Preceding Death. (Total)	39	72.20
Within second year	5	9.26
Within third year	3	5.55
More than three years	7	12.96
Grand totals	54	99.97

MONTHLY REPORT OF ADMISSIONS TO AND DISCHARGES FROM TUBERCULOSIS SANATORIUMS OF BOSTON CASES FOR THE MONTH OF OCTOBER, 1929.

Public Sanatoriums.	Admitted.	Discharged.
Boston Sanatorium	21	22
North Reading State Sanatorium	7	6
Lakeville State Sanatorium	2	2
Rutland State Sanatorium	13	5
Westfield State Sanatorium	7	3
Totals	50	38

Private Sanatoriums.	Admitted.	Discharged.
Doctor Lapham's Sanatorium	5	1
Plymouth County Sanatorium	—	1
Totals	5	2

CHILD HYGIENE DIVISION AND HEALTH UNITS.

Report of Activities of Medical Inspectors, October, 1929.

Inspections	35
Physical examinations for camps and day nurseries	67
Number toxoid administrations in parochial schools	1,777
Toxin-antitoxin administrations	95
Vaccinations	396
Vaccination certificates issued	331
Anti-typhoid inoculations	72
Number of visits to day nurseries	12
Number of visits to parochial schools	43
Conferences	2

CHILD HYGIENE DIVISION.

Report of Child Health Conferences, October, 1929.

Station.	Number of Babies.	Number of Pre-school (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	207	30	237	38	4	42	4	59
31 Lincoln street, Brighton	105	28	133	12	—	12	5	27
Charlestown Municipal Building	385	23	408	30	5	35	9	45
Codman Square Library	450	168	618	71	4	75	9	69
Columbia Road Municipal Building	584	33	617	69	3	72	9	69
1 Arcadia street, Dorchester	398	23	421	43	3	46	10	42
East Boston Health Unit	401	48	449	65	6	71	9	49
Hyde Park Municipal Building	273	17	290	49	2	51	10	29
Curtis Hall, Jamaica Plain	254	24	278	43	5	48	5	56
41 North Margin street	246	85	331	39	4	43	10	33
Roslindale Municipal Building	287	42	329	32	2	34	4	82
Children's Hospital	189	7	196	27	3	30	5	39
1049 Columbus avenue	336	116	352	49	4	53	10	35
Roxbury Health Unit*	388	26	414	58	—	58	9	46
133 Dorchester street, South Boston,	412	85	497	67	19	86	10	50
122 Tyler street	121	33	154	13	2	15	5	31
Shawmut Avenue Municipal Building,	163	22	185	16	—	16	5	37
57 East Concord street	191	9	200	25	—	25	5	40
17 Blossom street	301	52	353	23	—	23	9	39
Totals	5,691	771	6,462	769	66	835	142	46

CHILD HYGIENE DIVISION REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES, OCTOBER, 1929.

Station.	Toxin-Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	5	6	5	16	7
31 Lincoln street, Brighton	—	—	2	2	13
Charlestown Municipal Building	11	9	7	27	79
Codman Square Library	49	37	12	98	55
Columbia Road Municipal Building	13	12	11	36	109
1 Arcadia street, Dorchester	5	3	1	9	74
East Boston Health Unit	—	—	—	—	18
Hyde Park Municipal Building	3	4	4	11	34
Curtis Hall, Jamaica Plain	5	6	7	18	21
41 North Margin street	5	6	7	18	20
Roslindale Municipal Building	—	4	2	6	25
Children's Hospital	12	7	4	23	9
1049 Columbus avenue	—	—	1	1	108
Roxbury Health Unit*	2	1	1	4	83
133 Dorchester street, South Boston	9	19	7	35	14
122 Tyler street	1	3	—	4	22
Shawmut Avenue Municipal Building	3	2	3	8	7
57 East Concord street	—	—	—	—	—
17 Blossom street	5	4	2	11	19
Totals	128	123	76	327	717

* New Roxbury Health Unit opened October 26, 1929. Vine street cases moved to new unit.

DENTAL ACTIVITIES AT HEALTH UNITS.

OCTOBER, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	624	483	670	401	512	2,690
Number of Treatments:						
By dentist	967	593	670	394	497	3,121
By hygienist	252	209	219	110	167	957

Referred from: Public schools; Parochial schools; roof classes.

HEALTH UNIT ACTIVITIES.

OCTOBER, 1929.

BOSTON DISPENSARY:	
Calls by district physician	103
BOSTON LYING-IN HOSPITAL:	
Number prenatal clinics	19
Total attendance	219
New cases	55
COMMUNITY HEALTH ASSOCIATION:	
Homes visited	9,916
Cases referred	616
Diseases reported	15
Number of meetings of mothers' club	22
Attendance	337
CHILDREN'S HOSPITAL:	
Number of clinics	7
Attendance	58
BOSTON HEALTH DEPARTMENT:	
Refraction Service:	
Number of refractions	163
Glasses prescribed	59
New cases	51
Diagnosis	180
STATE DEPARTMENT, MENTAL HYGIENE:	
Number of clinics	4
Attendance	43
New cases	5

NURSING SERVICE.

HOMES VISITED		18,068
CHILD HYGIENE:		
Visits to new cases	1,602	
Visits to old cases	12,216	
Total		*13,818

* Includes 153 wrong addresses; 1,390 not seen; a total of 1,542 absent visits.

COMMUNICABLE DISEASES:		
Visits to new cases	610	
Visits to old cases	1,085	
Total		*1,695
TUBERCULOSIS:		
Visits to new cases	202	
Visits to old cases	5,491	
Total		†5,693
MISCELLANEOUS:		
Infant death investigations	74	
Maternal death investigations	3	
Patients accompanied to hospitals	4	
Visits to day nurseries	49	
Visits to parochial schools	722	
Total		852
Total number of visits		22,058

	Hrs.	Min.
Hours at station by nurses	3,336	55
Hours at baby and P. S. conferences	2,110	10
Hours at tuberculosis clinics	868	50
Total number of hours	6,315	55

* Includes 25 wrong addresses; 77 not seen; a total of 102 absent visits; 145 ophthalmia visits were also made.

† Includes 47 wrong addresses; 641 not seen; a total of 688 absent visits; 2,548 visits to positive cases; 1,716 to contact cases and 741 to suspect cases were made.

ACCIDENTS KILL MORE THAN WAR.

More people die annually from accidents in Illinois than were killed in action in any battle of the Civil War.

During the World War 36,931 United States soldiers were killed in action. During the past seven years accidents have resulted in 38,532 deaths in Illinois.

Only heart disease, cancer and nephritis among all the diseases cause greater mortality than do accidents. In some years the mortality from pneumonia is greater than that from accidents but the average is less.

These comparisons suggest the enormity of the accident problem. Since accidents occur because people are out of tune with their environment it appears that there must be more than a modicum of truth in the assertion that man is his own worst enemy.

— *Illinois Health Messenger*, 1, 17, September 1, 1929.

VITAL STATISTICS, OCTOBER, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING OCTOBER, 1929, WITH COMPARATIVE FIGURES FOR OCTOBER, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	844	936	—92	12.57	15.05	—1.48
Nonresidents deducted	664	756	—92	9.89	11.35	—1.46
By Age:						
Under one year	94	94	—	1.40	1.41	—.01
One year to four years, inclusive	23	21	+2	.34	.31	+.03
Sixty years and over	315	450	—135	4.69	6.76	—2.07
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	49	62	—13	.73	.93	—.20
Arteriosclerosis	22	23	—1	.33	.34	—.01
Heart disease	159	207	—48	2.37	3.11	—.74
Nephritis, chronic	58	46	+12	.86	.70	+.16
Infant and Maternal Mortality:						
a. Total registered live births*	1,224	1,343	—119	18.24	20.16	—1.92
b. Registered stillbirths	30	42	—12	.45	.63	—.18
Stillbirths per 1,000 births and stillbirths†	—	—	—	23.92	30.32	—6.40
c. Deaths of mothers from causes incident to childbirth	10	12	—2	.15	.18	—.03
d. Deaths of mothers per 1,000 births and stillbirths†	—	—	—	7.97	8.66	—.69
Deaths of children in first year of life	94	94	—	1.40	1.41	—.01
Deaths in first year per 1,000 live births,†	—	—	—	76.80	70.00	+6.80
Violence:						
Accidents	46	66	—20	.68	.99	—.31
Homicides	1	5	—4	.01	.075	—.065
Suicides	7	13	—6	.10	.19	—.09
Miscellaneous:						
Alcoholism, acute or chronic	10	11	—1	.15	.16	—.01
Broncho-pneumonia	40	59	—19	.49	.88	—.29
Cancer	95	107	—12	1.41	1.61	—.20
Cirrhosis of the liver	3	4	—1	.04	.06	—.02
Diabetes mellitus	19	13	+6	.28	.19	+.09
Diarrheal diseases, children under two years of age	9	14	—5	.13	.21	—.08

* Figures for live births subject to increase. † Rates subject to change.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	12	13	—1	.18	.19	—.01
Deaths.	3	1	+2	.04	.01	+.03
Cerebrospinal meningitis.....Cases..	2	1	+1	.03	.01	+.02
Deaths.	2	1	+1	.03	.01	+.02
Diphtheria.....Cases..	105	66	+39	1.56	.99	+.57
Deaths.	4	2	+2	.06	.03	+.03
Influenza.....Cases..	6	13	—7	.09	.19	—.10
Deaths.	1	2	—1	.01	.03	—.02
Measles.....Cases..	20	20	—	.30	.30	—
Deaths.	—	1	—1	—	.01	—.01
Pneumonia (lobar).....Cases..	96	92	+4	1.43	1.38	+.05
Deaths.	29	32	—3	.43	.48	—.05
Scarlet fever.....Cases..	186	120	+66	2.77	1.80	+.97
Deaths.	1	—	+1	.01	—	+.01
Tuberculosis (pulmonary).....Cases..	141	114	+27	2.10	1.71	+.39
Deaths.	53	30	+23	.79	.45	+.34
Tuberculosis (other forms).....Cases..	15	19	—4	.22	.28	—.06
Deaths.	4	4	—	.06	.06	—
Typhoid fever.....Cases..	13	10	+3	.19	.15	+.04
Deaths.	1	1	—	.01	.01	—
Whooping cough.....Cases..	107	65	+42	1.59	.97	+.62
Deaths.	1	—	+1	.01	—	+.01

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

CITY OF BOSTON PRINTING DEPARTMENT.

1559

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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TONSILS.

Back of the mouth and nose, the throat, the common entrance to the passageways to both the lungs and stomach, is surrounded by a ring of lymphoid tissue. Lymph follicles are the essential feature of lymphoid tissue. Lymph follicles are made up largely of lymph cells. Lymph cells appear in the lymph vessels. They are important constituents of lymph glands and to a considerable extent are produced in such glands. They are found in the blood where they are included under the general term white blood corpuscles or leucocytes. They appear in large numbers wherever in the body damage is being done whether by reason of the invasion of infective bacteria or of mechanical injury. At certain portions of the ring of lymphoid tissue, back of the nose and mouth, we find the lymph follicles systematically grouped into masses, enveloped by a supporting structure and forming essential elements of well-defined organs, known as the palatine and lingual tonsils. For the rest of the circumference of the ring the lymph follicles are to be found as practically unorganized deposits loosely associated with the general subcutaneous tissue and superficial muscles of this region. When these deposits become excessive and conspicuous, they are referred to as adenoids.

It would seem that there were a definite purpose in thus surrounding the back of the nose and mouth with this ring of lymphoid

tissue. A similar arrangement of lymphoid tissue is found in the throats of animals biologically resembling man. Anatomical provision for providing deposits of lymphoid tissue in this region are started in the course of fetal development. There can be no doubt that the purpose is protective. Lymph cells or leucocytes are always found taking part in bodily defense and repair. We probably do not yet fully appreciate the extent to which this ring of lymphoid tissue about the throat may serve its protective purpose. Our attention is usually drawn to its existence because it has become perverted from an asset into a liability so far as health is concerned. Then we treat it as a source of danger without considering that it has become so because we have overtaxed and overwhelmed its protective capacity.

The tonsillar region is the most common, but by no means the only site of a parasitic growth of the diphtheria bacilli. If the person be not immune to the poison or toxin which the diphtheria bacilli generate in the course of their growth, or in other words, if the person's blood does not contain diphtheria antitoxin, a clinical case of diphtheria with all its local and constitutional symptoms will follow the parasitic implantation of the diphtheria bacilli in the throat. The Schick test has shown that most people, who grow up in a city where diphtheria is prevalent, acquire immunity through development of the capacity to manufacture their own antitoxin without ever experiencing a recognizable attack of diphtheria. Then, too, it may happen that a person who has passed through an experience involving exposure to diphtheria under conditions which would seem to make opportunity for infection inescapable may show a positive reaction to the Schick test, indicating nonimmunity. We cannot say that the lymphoid tissue in the throat may not take part in the operation of the protective mechanism which evidently sometimes serves to prevent the development of clinical diphtheria on exposure to infection.

The tonsillar region is also the site of infection in acute tonsilitis. Acute tonsilitis is a self-limited disease running a definite course and terminating in a crisis, thus indicating that the body has succeeded in producing something which overcomes the causal infective organisms or which neutralizes the poison generated by them. Certain species or strains of streptococci or of staphylococci seem to be capable of producing an acute tonsilitis. Other organisms, including pneumococci and some unidentified bacteria, have been found associated with acute and chronic infections of the tonsils. Apparently some persons may harbor any of these organisms indefinitely in their throats without starting an acute tonsilitis. This fact suggests the possibility of some local protective mechanism. No

lasting immunity follows recovery from acute tonsilitis in spite of the evidence that the acute attack terminates because the body has developed something which enables it to overcome the infection. Acute tonsilitis is very likely to recur and the tendency to repeated attacks is to be found associated with unmistakable evidence of a chronically diseased condition of the tonsils, in other words with evidence that any protective function of the tonsils has been lost.

Attention may be directed to the lymphoid tissue about the throat in other ways. It may be that a child comes home from school with a notice from somebody to the effect that the child needs an operation for "tonsils and adenoids." This may come as unexpected information to the mother. Ever since the child was born the mother has been told by somebody or other who assumed to speak with authority just what and how much the child should eat and how much liquid of one sort or other should be crowded into the child's stomach every day in order to safeguard the child's health, but the mother has never received a word or suggestion regarding the prevention of the throat condition which she is now told demands an immediate surgical operation. If the mother postpones the operation until after the child's summer vacation it may be that the surgeon to whom the mother takes the child will report that there is nothing calling for an operation. Often, however, statements as to the need of an operation, whatever the agency which presumes to dictate in this matter, will prove to have been justifiable.

Lymph follicles and lymphoid tissue will increase in amount as the result of bacterial invasion or mechanical irritation. This tendency is especially pronounced in childhood. A foreign body in the eye or any other local irritation will rapidly give rise to conspicuous masses of lymph follicles in the eyelid. The follicles disappear rapidly on the removal of the irritation. This fact accounts for remarkable cures of what has been supposed to be trachoma. The production of lymph follicles in the eyelid is likewise a concomitant of a trachomatous infection of the eye, so that on the other hand recognition of such follicles with failure to recognize the associated trachomatous granules may cause trachoma to be mistaken for a *follicular conjunctivitis.*

An overgrowth of lymphoid follicles may occur in a child's throat as well as in his eyelids. If so, the child will show enlarged tonsils and adenoids. An overgrowth of the lymphoid tissue about the throat may disappear with the disappearance of its exciting cause, apparently having served successfully a useful purpose. Or the tonsils and perhaps other portions of the throat may become permanently infected and diseased and a source of chronic poisoning of the individual.

Various organisms with well recognized pathogenic possibilities frequently found about the mouth have been identified in diseased tonsillar tissue; so also have tubercle bacilli.

Diseased tonsils like other focal infections are dangerous, both because they may serve as distributing points of dangerous bacteria and because of the absorption of harmful poisons or toxins which such bacteria generate.

The effects of chronic infections vary in different individuals, perhaps because of the nature of the organisms involved, but so also by reason of some difference in the individuals themselves. It is natural to develop a certain degree of tolerance for any poison. A person with diseased tonsils and exhibiting local evidence of the absorption of poisonous products may go for years without discoverable effects on his general health.

The usual story, however, is that there comes a time, perhaps after some acute illness or perhaps not until the person has passed the prime of life, when it will be apparent that the diseased tonsils have done and are doing serious harm. Even apart from the possibility of systemic poisoning the persistence of an overgrowth of lymphoid tissue about the throat should be a subject of concern in a child for other reasons. Any mechanical obstructions in a child's throat will interfere with the normal development of the child's mouth, nose and cranium.

The subject of the prevention of "tonsils and adenoids" is taboo. It does not indicate good judgment to refer to it. One, however, who cares nothing for his reputation might suggest, in view of the observations mentioned in the foregoing, that the proclivity of children to develop troublesome tonsils and adenoids might be lessened by providing a child with an atmosphere to breathe which is not overheated, reasonably free from irritating dust and possessing 50 per cent or more or relative humidity; by keeping the child's mouth clean and free from decaying teeth or food and avoiding close associations which may result in the child's being overdosed with the bacterial products of adults with diseased noses and throats. The Smith Sound Eskimos may, however, be summoned to cast doubt on the value of some of these suggestions as they have confounded dietetic teachings based too largely on experiments with laboratory rodents. After observation for six years, a competent observer states that these isolated meat-eating people are not troubled with tonsils and adenoids. From testimony as to the character of the atmosphere of an Esquimo igloo it would seem that their freedom from troublesome tonsils and adenoids could be due no more to breathing a pure unirritating air than to sunshine.

One so reckless as to refer to a mere impression from clinical

experience might venture to state that the two types of children who seem to suffer most from trouble with the lymphoid tissue in their throats are the low-class defective neglected child and the coddled child in a well-to-do family who is being reared in strict accordance with what the mother is being told is the latest scientific knowledge. It will be found that both show evidence of lowered vitality. Perhaps after all food may have something to do with tonsils and adenoids. The poor child cannot get proper food and the other is so likely to be filled up and blown up with spinach and carrots and milk that he has little room or appetite for food needed to maintain the vitality of a young growing American human being in this climate. Some day it may be better appreciated that the real test of a child's health is not size or rapidity of growth but ability to overcome acute infections.

The possible dangers of a chronic infection in the throat cannot be over estimated. Some persons may seem to be escaping harm in some way but no one can tell when and how some serious consequences of such an infection may manifest itself. A considerable proportion of the premature deaths of persons from cardiovascular degeneration at about fifty years of age is probably attributable to chronic disease of the tonsils. There are, of course, other recognized causes of arteriosclerosis and other dangerous focal infections, but that is another story.

In a child, enlarged tonsils accompanied by enlargement of the neighboring cervical lymph glands persisting through a summer spent in conditions favorable to health may be accepted as evidence of a probably dangerous condition in the throat, even in the absence of such other common symptoms of tonsillar infection as recurrent acute inflammatory conditions of the throat or liability to colds, manifestations of chorea, or a tendency to an elevation of bodily temperature after exercise or without apparent cause.

As a person becomes older, overgrowths of lymphoid tissue about the throat tend to diminish, whether there be foci of chronic infection in this region or not, but even if the tonsils themselves do not appear abnormal chronic infection will be betrayed by an almost characteristic redness of the "pillars of the fauces" and palpable cervical glands. In an adult, recurrent attacks of tonsillitis, recurrent or persistent sinus infections, "rheumatism," arthritis, neuritis, deafness, or functional digestive troubles or abnormal blood pressure should direct attention to the tonsils, although one or all of such conditions may be due to other causes.

If evidence of chronic infection in the throat is found, whether in a child or an adult, a surgical operation for the removal of the tonsils should receive immediate consideration.

It is hardly conceivable that any circumstances could justify an operation for the removal of the tonsils before removing from the mouth any possible sources of septic absorption from dead or decaying teeth, or before cleaning up any other infections about the mouth or nose. It is rarely if ever justifiable to operate when symptoms of acute infection anywhere in the body are present. It is regarded by many to be inadvisable to operate on a child under five years of age. But when and how an operation for the removal of tonsils should be performed, or perhaps even whether it should be done at all is to be decided in the light of all the medical and surgical aspects of each particular case.

The operation for the removal of the tonsils is a real surgical operation. It is attended with a small but definite mortality. Death may occur from causes which no precautions or skill can absolutely prevent. Perhaps most deaths are due to the inhalation of blood clots, or of infective material or to the letting loose into the general circulation of poisonous material from the diseased tonsils. It is a more serious operation in an adult than in a child partly because the local conditions usually make the operation more difficult and also very often because the constitutional conditions for which the diseased tonsils are responsible have made the adult patient a poorer surgical risk.

In a child whose most conspicuous symptoms are due to mechanical obstruction in the throat the benefit following the removal of this obstruction is quickly apparent, but otherwise the results of an operation for the removal of tonsils are often disappointing. A person who has undergone an operation for the removal of his tonsils is fortunate if he does not feel generally miserable for awhile thereafter and perhaps worse with respect to the symptoms for which the operation was preformed. This condition is presumably due to the absorption of septic material from the site or vicinity of the operation and may be expected gradually to disappear if the operation has been performed by a skillful surgeon. Sometimes no permanent benefit to health follows an operation for removal of the tonsils when the evidence that they were seriously diseased is conclusive. The ill health may, of course, have been due to other causes, but more likely there has been a failure completely to remove or break up all the chronic foci of infection in the throat. Not infrequently, an examination after the throat has healed shows portions of the tonsils still remaining. It may be that the patient is an adult who says he cannot have trouble with his tonsils because they were removed in childhood.

The complete removal of all tonsillar tissue is a difficult operation calling for a high degree of manual dexterity and practice.

The surgeon has to work in a hole where a good view of the field of operation is practically unobtainable. The complete removal of tonsils is more difficult in an adult than in a child because a portion is more deeply buried in the throat in an adult and the tonsils of an adult are more likely to be distorted and bound down to adjacent parts by adhesions. Then the conformation of the mouth and throat makes the removal of tonsils more difficult in some persons than in others. One should not assume neglect or lack of skill on the part of a surgeon if he fails completely to remove a tonsil. Given certain conditions of tonsils in certain throats, their complete removal in a single operation is a practical impossibility. Then, too, it is to be remembered that while the involuted structure of the palatine tonsils make them especially liable to protect and preserve growths of harmful bacteria, similar pockets of infections may occur in other parts of the ring of lymphoid tissue about the throat or where such tissue once existed. A removal of the palatine tonsils may serve to disclose such other foci of infection. A person contemplating the removal of his tonsils should therefore realize that a second operation may be needed.

Efforts have naturally been made to find ways of successfully treating chronically diseased tonsils and stopping their dangers to health without removing them by a surgical operation.

There is a procedure which consists virtually in an attempt to locate pockets of infection by pressure and then open them up and clean them out, a process which is really piecemeal tonsillar surgery.

There is, of course, no hope of influencing deep-seated pockets of infection by a superficial application of antiseptics. The pockets themselves must be reached by any agent which is capable of producing beneficial results. Tissues must be penetrated and buried bacterial growths destroyed. Various forms of radiant energy, including high frequency electrical current, radium, X-rays and ultra-violet rays have been used for this purpose. It may be stated that under favorable throat conditions and with comparatively superficial pockets of infection any of these methods have given satisfactory results in the hands of certain operators. More often, however, the demonstrated results have been loss of time and money. Then too, high frequency electrical currents, radium and X-rays and perhaps even ultra-violet rays have their own dangers. Of them all, given the right throat conditions and a specially designed applicator and an experienced physician and operator, the ultra-violet rays are probably preferable as an experimental procedure. The action of ultra-violet rays is different from the other agents above mentioned. Furthermore, it has the advantage that unlike the electrical current or X-rays, the ultra-violet rays do not cause scars and adhesions which make a subsequent surgical operation more difficult.

The ultra-violet rays may be expected to be valueless when the tonsils are markedly enlarged, except possibly to so affect the tissues as to reduce the hemorrhage of a removal operation. While persistent treatment of the tonsillar area with the ultra-violet lamp may be followed by disappearance of symptoms of toxic absorption in selected cases even without removal of the tonsils, the chief field of usefulness of the ultra-violet rays would seem to be to destroy small superficial foci of infection which may not have been removed or opened up by a surgical operation for removal of the tonsils.

CHARLESTOWN HEALTH UNIT DEDICATED.

Boston dedicated its fifth health unit, constructed under the George Robert White Fund, at the corner of High and Elm streets, Charlestown, on November 22, 1929. The building is larger than those previously opened, and represents many new ideas in construction and equipment. The cost was approximately $350,000. The exterior is of water-struck brick and limestone, designed in the Georgian period of Colonial architecture by Coolidge, Shepley, Bulfinch and Abbott, the firm which has designed all of the units under the George Robert White Fund.

The dedicatory exercises followed closely those of previous occasions and Boston was conceded to be the pioneer in this work. The exercises were opened by George E. Phelan, manager of the White Fund. Charles A. Coolidge, senior member of the architectural firm, turned over the key to Herbert Parker, president of the Boston Bar Association and chairman of the White Fund Trustees, who so aptly stated that "no greater gift could any man give to his fellows than a temple of health." The key was then handed to Mayor Nichols, in behalf of the trustees.

Mayor Nichols set forth that the income from the White Fund could not have been used in a more advantageous or useful way than for Health Units, as conducted in Boston.

Mayor-Elect James M. Curley occupied a seat on the platform and paid tribute to George Robert White and the idea of Health Units.

Health Commissioner Mahoney spoke of the great assistance in health work which will follow as a result of the linking up of the activities of the Girl and Boy Scouts, who are already working in the West End and South Boston.

Dr. John F. O'Brien, former president of the Charlestown Medical Society, said that George Robert White "had written his name in letters of gold on the pages of humanity."

Thomas H. Green, member of the City Council from Charlestown, and Judge Charles S. Sullivan also spoke.

Prof. C. E. A. Winslow, Professor of Public Health at Yale, in his dedicatory address reviewed the progress of medical work and the prevention of disease.

The invocation was given by Rev. Henry Lyons, pastor of St. Catherine's Church, Charlestown, and the benediction by Rev. Wolcott Cutler, pastor of St. John's Episcopal Church.

GOOD AIR AND ULTRA-VIOLET LIGHT.

That dust in the atmosphere shuts out the health giving ultra-violet rays of the sun is a well-known belief. Recently three Baltimore investigators reported to the "American Journal of Public Health" the results of experiments made in the city of Baltimore and in the country around it.

Cups to catch the settling from the atmosphere were placed in the center of the city, in the near suburbs and in farms about ten miles out in the country. Calculations from the contents of these cups indicated that the total solids in the atmosphere for each of the three areas amounted to 1,800 tons per square mile per year in the city; 800 tons in the suburbs and only 340 tons in the country.

Then the amounts of ultra-violet light in each area were estimated and checked by several methods and it appeared that the amount was 50 per cent greater in the country than in the city. Measurements made at the top of a tall city building showed that the amount of dust was materially less than at street level and there was more ultra-violet light.

In the course of measurements of ultra-violet light on both clear and cloudy days it appeared that skyshine yields about 70 per cent of the amount of ultra-violet light that is received through direct sunlight. This probably explains why it is possible to get a severe sunburn when it is cloudy.— *Adapted from Hygeia.*

MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE HELD ANNUAL MEETING NOVEMBER 13.

For the fourth consecutive year the annual meeting of the Massachusetts Society for Mental Hygiene included a speaker of note in the field of industry. The meeting was held at the Twentieth Century Club, 3 Joy street, on Wednesday, November 13. The speaker was Meyer Bloomfield, Consultant on Industrial Relations, and the subject of his address, "Preventive Management." Meyer Bloomfield is no stranger to Massachusetts industry. He is nationally known as an authority on industrial relations and vocational problems.

To add to the interest of the program, there was one other speaker Dr. A. Warren Stearns, Commissioner of the Department of Correction, Commonwealth of Massachusetts, who spoke on "Psychiatry in Penal Administration."

HOW TO KEEP WELL.

To Avoid Illness.

Keep clean and wash your hands before eating and as often as possible.

Avoid crowds as much as possible. Influenza is spread by persons before they begin to feel sick. Keep away from persons who have coughs, colds or sore throats. It is such complications of influenza which make influenza dangerous. Do not use common towels or drinking cups and be sure that all eating and drinking utensils at home and elsewhere have been sterilized in boiling water or steam. Do not patronize dirty eating places or refreshment counters.

Avoid visiting the sick. Avoid those that spit or cough promiscuously, whether indoors or outdoors. Use handkerchiefs liberally if you have a cough or cold and be sure to use one to cover a sneeze. All handkerchiefs should be boiled after use. Hands contaminated by handkerchiefs should be washed.

Keep yourself warmly clad, eat plenty of plain, nourishing food, and avoid unnecessary stimulants.

Don't worry, overwork, or exhaust yourself. Safeguard yourself against chilling. Keep your feet dry and warm and remove wet clothing as soon as possible.

Get plenty of fresh air and exercise. Keep your sleeping room open at night. Retire early.

If you feel sick, call a doctor and go to bed at once.

For Households Where There is Any Illness.

Keep everyone out of the sick room whose attendance is unnecessary. Visitors may bring other infections to the patient. Boil all articles used in the sick room immediately after use. Keep the patient in bed until permitted by the doctor to get up. Do not entertain guests or go visiting while there is influenza in the home.

UNDULANT FEVER MADE REPORTABLE DISEASE.

The following notice has been received from the State Department of Health:

December 5, 1929.

"*To Local Boards of Health:*

This is to notify you that at a meeting of the Department of Public Health on November 19, 1929, it was voted to add undulant fever to the list of diseases declared to be dangerous to the public health, and as such reportable. This addition becomes effective January 1, 1930.

(Signed) George H. Bigelow,
Commissioner of Public Health.

A VISITOR FROM THE PHILIPPINES.

Dr. Jacob Fajardo, Director of Public Health of the Philippine Islands, who is making a tour of this country studying public health administration, recently spent three days at the Boston Health Department, observing its routine methods. He was especially interested in the activities of the Division of Child Hygiene and in the program of the Health Units. He accompanied the inspectors of the department on inspections which included the market district, Fish Pier and one of the large candy manufacturing establishments and personally observed other phases of the field work of the department.

OPEN-AIR EXERCISE.

Even though the weather is colder, and many times the walking is not of the best because of stormy weather, we need fresh air just as much as we did in the spring and summer, and even more the beneficial rays of the sun.

We are inclined to remain indoors on account of the cold, and to avoid exposure to the open air, even if we do not manage to avoid going out at all. We should use all possible means to obtain as much fresh air in the cold weather as during the summer. If this were done, we should not so often be the victims of colds and other respiratory diseases. Open-air exercise in the winter is the best health-giving tonic and no medicine is an adequate substitute. No matter how cold it may be out of doors, a brisk walk will stimulate you and you can start the day's work in good shape. A good walk morning and night is a good habit and no hardship.

PROTECTION AGAINST DISEASE.

It is far better to be safe with vaccination than to take a chance and wait until it is too late. Make it a point that the next time you visit your family physician, or, if he calls at your home, to arrange for vaccination against smallpox and typhoid fever for every member of the family, and for the immunization against diphtheria of those children who are below school age. Each year, at the beginning of the school term, physicians in the public schools provide this immunization to each child whose parents show a willingness or desire to have the child so protected, and in the parochial schools the physicians of the Health Department are immunizing those of the entering classes whose parents consent to the procedure. The best time for immunizing children is at one year of age, and the Health Commissioner is urging parents to bring their young children to their family physician or to the Health Department health unit or conference station for immunization.

THE POPULATION OF BOSTON.

Boston's census record in 1920 was 748,060, an increase of 9 per cent over 1910. If the same rate of increase holds, the 1930 figure should be in the vicinity of 810,000. The state census in 1925 showed 779,620, which is consistent with the estimate for 1930.

SUMMARY OF WORK, NOVEMBER, 1929.

ADMINISTRATION DIVISION.

Prosecutions	3	Personnel:	
Legal notices	135	Permanent appointments	4
Vacate notice	1	Promotions	1
Settlements:		Leaves of absence	2
Total cases	118		
Notices	89		
Bills	29		

LICENSES, PERMITS, ISSUED, DISAPPROVED, ETC.

Burial permits	984	Garbage transportation	1
Denatured alcohol	30	Beverage	1
Hen licenses	14	Dumps approved	3
Manicure-massages granted	210	Dumps disapproved	2
Manicure-massage disapproved	1	Milk	130
Ice-cream manufacturers	1	Pedlers	28
Ice cream dealers	32	Pasteurization	2
Grease	1	Dairy supply excluded	1

MEDICAL DIVISION.

Reported cases	1,587	Visits:	
Nonresidents	89	By V. D. investigator	278
Deaths investigated	17	By medical inspectors to cases of communicable disease	585

BACTERIOLOGICAL LABORATORY DIVISION.

Diphtheria	1,087
Tuberculosis	364
Typhoid	34
Gonorrhea	858
Gonorrheal ophthalmia	62
Syphilis	907
Other examinations *	309
Bacteriological examinations of milk	666
Bacteriological examinations of ice cream	30
Dark field	4
Genito urinary T. B.	22
Malaria	3

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* Smears for streptococci, 67; Vincent's angina, 5; virulence, 6; spinal fluids, 6; cookies for pathogens, 2; lobster for putrefaction, 2; flour for worms, 1; smear for tuberculosis, 1; urine for typhoid, 14; feces for typhoid, 14; urines, 191; swimming pools, 64; extra waters, 3.

FOOD DIVISION.

SURVEY OF THE QUALITY OF MILK SOLD IN BOSTON BY WAGON DEALERS AND CHAIN STORES.

The following is a survey made of milk sold in Boston by wagon dealers and chain stores during November, 1929.

All milk sold in Boston is pasteurized, excepting only milk certified by the Medical Milk Commission of Boston, Inc., which may be sold either raw as certified milk, or pasteurized as certified milk — pasteurized.

All bacteria counts are made by the standard plate method of the American Public Health Association, using beef extract agar adjusted to a pH of 6.6.

MARKET MILK — PASTEURIZED.

Massachusetts statute law requires not less than 12 per cent milk solids and not less than 3.35 per cent milk fat. The Boston Health Commissioner requires an age of not more than seventy-two hours; a bacterial content of not more than 750,000 in one cubic centimeter before pasteurization, and not more than 50,000 in one cubic centimeter when offered for sale.

Name of Dealer.	Solids.	Fat.	Standard Plate Count of Bacteria in One in Cubic Centimeter.
	Per Cent.	Per Cent.	
Allen, Fred H.	12.60	3.85	4,000
Antetomasso, Peter	12.68	4.02	21,000
Bancroft, Hugh *	13.70	4.60	14,000
Brandley, F. J. & P. J.	12.45	3.90	75
Buxton, William E.*	13.68	4.70	5,000
Casey, James D.	12.58	4.05	13,000
Cashin, J. F., & Co.	12.60	4.00	22,000
Cedar Hill Farm, Inc.	12.19	3.55	12,000
Chapin, George L.	12.70	4.05	11,000
Clark, Levi	12.70	4.08	15,000
Corkery, J. J.	12.58	4.00	9,000
Cosgrove, M. S.	12.66	3.85	26,000
Daley, John	12.61	3.98	10,000
Dean, Louis W.*	13.43	4.43	14,000
Deerfoot Farms Company	12.89	4.15	9,000
Denehy, Timothy	12.88	4.03	12,000
Driscoll, William B., Company	12.57	3.97	10,000
Edgerly, Frank S.	12.78	4.10	8,000
Elm Spring Farm Company	12.43	3.83	12,000
Ferguson, Malcolm D.	12.77	3.95	34,000
Garfield, Mason	14.82	5.60	10,000
Garvin, Charles	15.13	5.65	400

Name of Dealer.	Solids.	Fat.	Standard Plate Count of Bacteria in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Giroux, J. E. & H. J.	12.78	4.06	18,000
Griffin, Joseph L.	12.91	4.12	12,000
Gushee, Chester W.	12.61	3.85	10,000
Hampden Creamery Company	12.61	3.99	30,000
Herlihy Brothers, Inc.	12.53	3.85	11,000
Hickey, J. B.	12.61	4.10	7,000
Holden, J. E.	12.50	3.95	12,000
Hood, H. P., & Sons, Inc.	12.41	3.90	19,000
Jones, William T., Company	12.97	4.25	11,000
Kendall Brothers	12.79	4.00	18,000
Kingston Brothers	12.67	3.86	11,000
Knapp, George J.	12.63	3.83	17,000
Lang Brothers	12.80	3.97	69,000
Larsson, Charles	12.89	4.00	10,000
Lyndonville Creamery Association	12.91	4.03	12,000
Manning, Harriet	12.44	3.78	24,000
McAdams, J. F., & Brother, Inc.	12.85	4.12	12,000
McKernan, John	12.78	4.00	22,000
Munchback, Albert W.	12.52	3.81	23,000
New England Creamery Products Company *	12.75	4.10	17,000
Robinson, A. J.	13.10	4.24	11,000
Schuster, Adam	12.29	3.83	18,000
Seven Oaks Dairy Company	12.72	3.95	41,000
Shick, Jacob	12.47	3.69	30,000
Somerset Farms Milk Company	13.35	4.40	9,000
Sterling Farms Milk Company	12.30	3.78	12,000
Stone, H. L.	12.69	4.01	26,000
Stuart, W. E., Company	12.71	3.95	28,000
Turner Centre System	12.42	3.85	13,000
United Farmers' Co-operative Creamery Association	13.01	4.20	12,000
Walker-Gordon Laboratory Company *†	12.56	4.00	100
Weiler, E., & Sons	12.82	4.01	11,000
Westwood Farms Milk Company	12.65	3.94	8,000
White Brothers	12.46	3.93	12,000
Whiting Milk Companies	12.46	3.90	16,000
Whittemore, W. D.	12.79	3.96	13,000
Williams, E. C.	12.70	4.20	13,000
Wiswall, Granville A.	12.49	3.93	16,000
Woodland, Charles L.	12.85	4.28	8,000

* Milk from tuberculin tested cows.
† All cows tested and free from infectious abortion reported.

CHAIN STORE MILK — MARKET MILK — PASTEURIZED.

Name of Dealer.	Supplied by	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood, H. P., & Sons, Inc...	12.39	3.88	66,000
M. Brown & Sons.....	United Farmers Co-operative Creamery Association.	13.00	4.13	11,000
Cloverdale Company, The.....	Turner Centre System.....	12.44	4.00	21,000
Economy Grocery Stores Corporation.	Herlihy Brothers, Inc.....	12.60	3.90	14,000
First National Stores, Inc.....	Bellows Falls Co-operative Creamery.	13.04	4.18	10,000
Morgan Brothers Company.*....	New England Creamery Products Company.	12.88	4.23	17,000
M. Winer Company.....	M. Winer Company.....	13.17	4.37	13,000

* Milk from tuberculin tested cows.

GRADE A MILK — PASTEURIZED.

Massachusetts law required not less than 4 per cent milk fats; production from Grade A dairies; an age of not more than forty-eight hours before pasteurization; a bacterial content of not more than 250,000 in one cubic centimeter before pasteurization, and not more than 25,000 in one cubic centimeter when delivered.

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Standard Plate Count of Bacteria in One Cubic Centimeter.
Antetomasso, Peter.....	13.00	4.20	23,000
Cosgrove, Martin S.....	13.48	4.65	16,000
Dean, Louis W.*.....	13.40	4.40	8,000
Elm Spring Farm Company.....	12.89	4.23	8,000
Griffin, Joseph L.....	13.23	4.42	9,000
Herlihy Brothers, Incorporated.....	12.62	4.30	8,000
Hood, H. P., & Sons, Inc.....	12.78	4.38	14,000
Jones, William T., Company.....	13.43	4.50	2,500
McAdams, J. F., & Brothers, Inc.....	13.05	4.63	11,000
Robinson, A. J.....	13.49	4.60	14,000
Seven Oaks Dairy Company.....	13.25	4.30	9,000
Sterling Farms Milk Company.....	13.38	4.85	8,000
Turner Centre System.....	13.38	4.60	10,000
Weiler, E., & Sons.....	12.96	4.18	7,000
White Brothers.....	13.23	4.50	10,000
Whiting Milk Companies.....	12.71	4.26	10,000
Woodland, Charles L.....	13.28	4.50	2,000

* Milk from tuberculin tested cows.

CERTIFIED MILK.

Raw milk produced, bottled and sealed at the farm under the supervision of the Medical Milk Commission of Boston, Inc. Fat content not less than 3.50 per cent and averaging not less than 4 per cent during ninety days. Bacterial content not more than 10,000 in one cubic centimeter. All cows tuberculin tested.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Standing Plate Count of Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	13.04	4.40	3,000
Hood, H. P., & Sons, Inc.	Own	14.23	5.05	2,500
New England Creamery Products Company. Turner Centre System	Bellows Stock Farm	13.04	4.20	3,000
	Alta Crest	13.09	4.40	1,100
Walker-Gordon Laboratory Co.*	Own	12.63	4.05	8,300
Whiting Milk Companies	Hampshire Hills	13.42	4.40	2,700
	Alta Crest	12.91	4.20	1,300

* All cows tested and reported free from infectious abortion.

CERTIFIED MILK—PASTEURIZED.

The standards, before pasteurization, to be the same as for Certified Milk. Produced, bottled, sealed and pasteurized under the supervision of the Medical Milk Commission of Boston, Inc.

Name of Dealer.	Kind of Certified Milk.	Solids. Per Cent.	Fat. Per Cent.	Standing Plate Count of Bacteria in One Cubic Centimeter.
Cedar Hill Farm, Inc.	Own	12.22	3.50	150
Hood, H. P., & Sons, Inc.	Own	13.37	4.40	75

MILK INSPECTION—SAMPLES EXAMINED.

Chemical:	
Milk fom wagons	372
Milk from stores	874
Milk brought by citizen	1
Eggs	3
Meat	1
Vinegar	269
Water	2
Miscellaneous examinations	2
Samples referred to Bacteriological Laboratory for examination:	
Ice cream	30
Milk	666
Court cases	5
Fines	$95

DAIRY DIVISION.

Total services	1,334	Total cattle inspected	8,124
Dairies inspected	481	Inspections of milk plants and licensed dealers	260
Scoring above 50 *	332	Bacteriological examinations	260
Scoring below	149	Country creamery inspection	7
With milk rooms	372	Sediment tests	312
Without milk rooms	109		
Inactive	13		

* Passable mark.

FOOD INSPECTION DIVISION.

NOVEMBER, 1929.

District inspections	2,881
Reinspections	606
Market inspections	1,990
Terminal inspections	368
Vehicle inspections *	7,297
Stand inspections	2,665
Complaints	26
Notices to abate	145
Condemnations	56,136 pounds
Samples taken	47
Pedler Service:	
Number assigned	30
Licenses certified	40
Vehicles approved	542
Licenses to remove bones	52

* This represents weekly inspections by four inspectors of about three hundred pedlers' vehicles on the Saturday market.

ABATTOIR DIVISION.

Cattle inspected	3,654	Parts condemned	1,139
Calves inspected	3,741	Animals condemned	84
Swine inspected	3,773	Total of meat condemnations (pounds)	23,468
Sheep inspected	636		

SANITARY DIVISION.

Original inspections	2,424	Complaints investigated	569
Causes for action found	1,870	Nuisances abated	2,254
Reinspections	8,124	Routine inspections	3,612
Legal notices served	170		

SOCIAL SERVICE INSTRUCTION.

A very valuable course of lectures is offered by the State Department of Public Welfare. This group which began on October 31, is primarily for social workers employed by the State Department of Public Welfare, by boards of public welfare in cities and towns throughout the state, or by private social agencies. These lectures are held on Thursdays at 9.15 a. m., and the fee for the course is $5. Application should be made to Richard K. Conant, Room 37, State House.

Districts.	Number of Clinic Sessions.	Total Number of Patient Visits at Clinics.			Total Number of New Examinations at Clinics.		
		Adults.	Children.	Total.	Adults.	Children.	Total.
South End	15	124	98	222	28	19	47
East Boston	13	56	85	141	10	6	16
West End	12	41	63	104	6	2	8
North End	12	51	61	112	3	5	8
South Boston	12	51	71	122	6	22	28
Boston Dispensary	7	18	7	25	12	2	14
Brighton	5	11	3	14	2	1	3
Charlestown	6	15	16	31	3	6	9
Codman square	11	72	95	167	5	5	10
Hyde Park	7	48	55	103	4	17	21
Fields Corner	4	18	27	45	3	5	8
Roxbury	2	19	17	36	6	7	13
Totals	106	524	598	1,122	88	97	185

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray.
South End	15	23	40	120
East Boston	7	6	—	53
West End	8	7	—	—
North End	7	9	—	64
South Boston	27	4	—	82
Boston Dispensary	2	1	63	—
Brighton	1	3	—	—
Charlestown	6	—	—	—
Codman square	8	2	—	—
Hyde Park	19	4	—	—
Fields Corner	5	3	—	—
Roxbury	7	4	—	—
Totals	112	66	103	319

DIRECTORY OF DISPENSARIES IN BOSTON.

The Boston Health League has prepared a directory of Boston dispensaries which may be of value to many social agencies.

It includes information regarding thirty-four dispensaries or out-patient departments of hospitals in the city, offering over 400 health services either freely or for a small fee. This information was obtained by the League, through visits or by mail, directly from the agencies involved.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING NOVEMBER, 1929.

Classification.	Number.	Percentage.
After death	16	38.10
Seven days or less	3	7.14
Eight to fourteen days, inclusive	2	4.76
Fifteen to twenty-one days, inclusive	1	2.38
Twenty-two to thirty-one days, inclusive	1	2.38
Within First Month. (Total)	23	54.76
Within second month	1	2.38
Within third month	—	—
Within fourth month	2	4.76
Within fifth month	2	4.76
Within sixth month	1	2.38
Within seventh month	—	—
Within eighth month	—	—
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	29	69.04
Within second year	7	16.67
Within third year	1	2.38
More than three years	5	11.91
Grand totals	42	100.00

MONTHLY REPORT OF ADMISSIONS TO AND DISCHARGES FROM TUBERCULOSIS SANATORIUMS OF BOSTON CASES FOR THE MONTH OF NOVEMBER, 1929.

Public Sanatoriums.	Admitted.	Discharged.
Boston Sanatorium	21	20
North Reading State Sanatorium	5	2
Lakeville State Sanatorium	2	3
Rutland State Sanatorium	4	5
Westfield State Sanatorium	1	1
Totals	53	31

Private Sanatoriums.	Admitted.	Discharged.
Doctor Lapham's Sanatorium	2	2
Plymouth County Sanatorium	—	—
Totals	2	2

CHILD HYGIENE DIVISION.

Report of Activities of Medical Inspectors, November, 1929.

Inspections	348
Physical examinations	282
Schick tests	43
Toxin antoxin administrations	145
Toxoid administrations	71
Vaccinations	225
Vaccination certificates	82
Antityphoid innoculations	142
Day nursery visits	35
Conferences	22

Report of Child Health Conferences, November, 1929.

Station.	Number of Babies.	Number of Pre-school (age) Children.	Total Attendance.	Number of New Babies.	Number of New Preschool (age) Children.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	229	33	262	29	11	40	4	66
31 Lincoln street, Brighton	63	5	68	9	—	9	3	23
Charlestown Municipal Building	245	6	251	23	1	24	7	36
Codman Square Library	352	35	387	50	5	55	7	55
Columbia Road Municipal Building	311	16	327	34	7	41	7	47
1 Arcadia street, Dorchester	327	21	348	39	7	46	7	50
East Boston Health Unit	275	24	299	41	—	41	6	50
Hyde Park Municipal Building	207	21	228	28	—	28	7	34
Curtis Hall, Jamaica Plain	197	14	211	20	—	20	4	53
41 North Margin street	151	41	192	19	5	24	7	27
Roslindale Municipal Building	144	16	160	25	1	26	3	53
Children's Hospital	151	8	159	19	2	21	4	40
1049 Columbus avenue	283	12	295	17	1	18	7	42
Roxbury Health Unit	389	20	409	77	4	81	8	51
133 Dorchester street, South Boston	292	51	343	44	6	50	7	49
122 Tyler street	104	16	120	18	2	20	4	30
Shawmut Avenue Municipal Building	164	28	192	16	1	17	4	48
57 East Concord street	179	5	184	21	1	22	3	61
17 Blossom street	189	17	206	17	1	18	6	34
Totals	4,252	389	4,641	546	55	601	105	45

CHILD HYGIENE DIVISION REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES, NOVEMBER, 1929.

Station.	Toxin-Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	2	2	1	5	17
31 Lincoln street, Brighton	—	—	—	—	2
Charlestown Municipal Building	—	—	—	—	18
Codman Square Library	42	34	43	119	33
Columbia Road Municipal Building	11	13	14	38	20
1 Arcadia street, Dorchester	10	15	8	33	19
East Boston Health Unit	—	—	—	—	5
Hyde Park Municipal Building	3	4	4	11	8
Curtis Hall, Jamaica Plain	2	1	2	5	14
41 North Margin street	1	1	4	6	2
Roslindale Municipal Building	—	—	—	—	10
Children's Hospital	4	9	9	22	16
1049 Columbus avenue	3	2	1	6	23
Roxbury Health Unit	23	15	3	41	17
133 Dorchester street, South Boston	5	3	3	11	6
122 Tyler street	4	3	1	8	6
Shawmut Avenue Municipal Building	8	2	1	11	7
57 East Concord street	6	4	2	12	5
17 Blossom street	8	1	2	11	2
Totals	132	109	98	339	230

DENTAL ACTIVITIES AT HEALTH UNITS.

NOVEMBER, 1929.

	East Boston.	North End.	South Boston.	South End.	West End.	Totals.
Number of cases seen	507	384	622	424	466	2,403
Number of Treatments:						
By dentist	864	470	744	473	455	3,006
By hygienist	172	195	194	114	144	819

Referred from: Public schools; Parochial schools; roof classes.

HEALTH UNIT ACTIVITIES.

NOVEMBER, 1929.

BOSTON DISPENSARY:	
Calls by district physician	103
BOSTON LYING-IN HOSPITAL:	
Number prenatal clinics	3
Total attendance	178
New cases	55
COMMUNITY HEALTH ASSOCIATION:	
Homes visited	10,204
Cases referred	431
Diseases reported	26
Number of meetings of mothers' club	19
Attendance	296
CHILDREN'S HOSPITAL:	
Number of clinics	5
Attendance	52
BOSTON HEALTH DEPARTMENT:	
Refraction Service:	
Number of refractions	171
Glasses prescribed	56
New cases	50
Diagnosis	200
STATE DEPARTMENT, MENTAL HYGIENE:	
Number of clinics	4
Attendance	68
New cases	10

NURSING SERVICE.

HOMES VISITED		16,146
CHILD HYGIENE:		
Visits to new cases	1,061	
Visits to old cases	10,418	
Total		*11,478

* Includes 115 wrong addresses; 1,125 not seen; a total of 1,240 absent visits.

COMMUNICABLE DISEASES:		
Visits to new cases	1,006	
Visits to old cases	1,791	
Total		†2,797
TUBERCULOSIS:		
Visits to new cases	179	
Visits to old cases	4,366	
Total		‡4,545
MISCELLANEOUS:		
Infant death investigations	56	
Maternal death investigations	5	
Patient accompanied to hospital	1	
Visits to day nurseries	43	
Visits to parochial schools	438	
Total		543
Total number of visits		19,364
	Hrs.	Min.
Hours at station by nurses	3,861	
Hours at baby and P. S. conferences	1,391	50
Hours at tuberculosis clinics	840	
Total number of hours	6,052	50

† Includes 32 wrong addresses; 85 not seen; a total of 117 absent visits; 125 ophthalmia visits were also made.

‡ Includes 29 wrong addresses; 436 not seen; a total of 465 absent visits; 2,019 visits to positive cases, 1,489 to contact cases and 572 to suspect cases were made.

CARBON MONOXIDE POISONING.

Carbon monoxide poisoning is very common and in most instances unsuspected. It is usually thought of as a rapidly fatal poisoning such as comes from inhaling gas from an illuminating gas jet or from running an automobile in a small garage. But headaches, nausea or dizziness attributed to other causes are often due to carbon monoxide poisoning. A kitchen gas range in which combustion is imperfect by reason of dirty or improperly adjusted burners is a frequent source of carbon monoxide poisoning. The feeling of tightness across the forehead, a headache or a feeling of exhaustion which follows an automobile ride may not be due to "eye strain" but to a leaky engine exhaust which lets up in a closed car, or even in a touring car, carbon monoxide gas and other products of incomplete combustion of gasolene and oil. A more or less constant exposure to small amounts of carbon monoxide leads to a chronic poisoning which may manifest itself in various symptoms of ill health, none of which will be indicative of the real cause of trouble. It is an excellent time of the year to have all gas equipment in your homes examined by an experienced man.

VITAL STATISTICS, NOVEMBER, 1929.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING NOVEMBER, 1929, WITH COMPARATIVE FIGURES FOR NOVEMBER, 1928.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
All Causes:						
Total deaths	853	948	—95	12.71	14.23	—1.52
Nonresidents deducted	672	758	—86	10.01	11.38	—1.37
By Age:						
Under one year	103	87	+16	1.53	1.31	+.22
One year to four years, inclusive	18	33	—15	.27	.49	—.22
Sixty years and over	377	418	—41	5.62	6.28	—.66
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	49	54	—5	.73	.81	—.08
Arteriosclerosis	27	26	+1	.40	.39	+.01
Heart disease	151	215	—64	2.25	3.23	—.98
Nephritis, chronic	66	73	—7	.98	1.10	—.12
Infant and Maternal Mortality:						
a. Total registered live births *	1,125	1,171	—46	16.76	17.58	—.82
b. Registered stillbirths	23	30	—7	.34	.45	—.11
Stillbirths per 1,000 births and stillbirths †	—	—	—	20.03	24.98	—4.95
c. Deaths of mothers from causes incident to childbirth	9	7	+2	.13	.10	+.03
Deaths of mothers per 1,000 births and stillbirths †	—	—	—	7.84	5.83	+2.01
Deaths of children in first year of life	103	87	+16	1.53	1.31	+.22
Deaths in first year per 1,000 live births,†	—	—	—	91.55	74.29	+17.26
Violence:						
Accidents	56	52	+4	.83	.78	+.05
Homicides	3	2	+1	.04	.03	+.01
Suicides	10	8	+2	.15	.12	+.03
Miscellaneous:						
Alcoholism, acute or chronic	9	18	—9	.13	.27	—.14
Broncho-pneumonia	48	54	—6	.71	.81	—.10
Cancer	95	113	—18	1.41	1.70	—.29
Cirrhosis of the liver	5	4	+1	.07	.06	+.01
Diabetes mellitus	20	11	+9	.30	.16	+.14
Diarrheal diseases, children under two years of age	7	17	—10	.10	.25	—.15

Note all totals and rates subject to slight increase.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1929.	1928.	Increase or Decrease.	1929.	1928.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	10	3	+7	.15	.04	+.11
Deaths.	2	1	+1	.03	.015	+.015
Cerebrospinal meningitis.....Cases..	5	4	+1	.07	.06	+.01
Deaths.	5	2	+3	.07	.03	+.04
Diphtheria.....Cases..	135	65	+70	2.01	.97	+1.04
Deaths.	6	2	+4	.09	.03	+.06
Influenza.....Cases..	10	13	—3	.15	.19	—.04
Deaths	6	6	—	.09	.09	—
Measles.....Cases..	35	24	+11	.52	.36	+.16
Deaths.	—	—	—	—	—	—
Pneumonia (lobar).....Cases..	100	75	+25	1.49	1.13	+.36
Deaths.	26	23	+3	.39	.34	+.05
Scarlet fever.....Cases..	302	164	+138	4.50	2.46	+2.04
Deaths.	1	3	—2	.015	.04	—.0250
Tuberculosis (pulmonary).....Cases..	115	99	+16	1.71	1.49	+.22
Deaths.	42	48	—6	.62	.72	—.10
Tuberculosis (other forms).....Cases..	28	27	+1	.42	.40	+.02
Deaths.	4	7	—3	.06	.10	—.04
Typhoid fever.....Cases..	4	9	—5	.06	.13	—.07
Deaths.	1	1	—	.015	.015	—
Whooping cough.....Cases..	159	83	+76	2.37	1.25	+1.12
Deaths.	2	2	—	.03	.03	—

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1929 (mid-year), based upon the federal census of 1920, has been used.

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CITY OF BOSTON PRINTING DEPARTMENT.

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